ARIZONA

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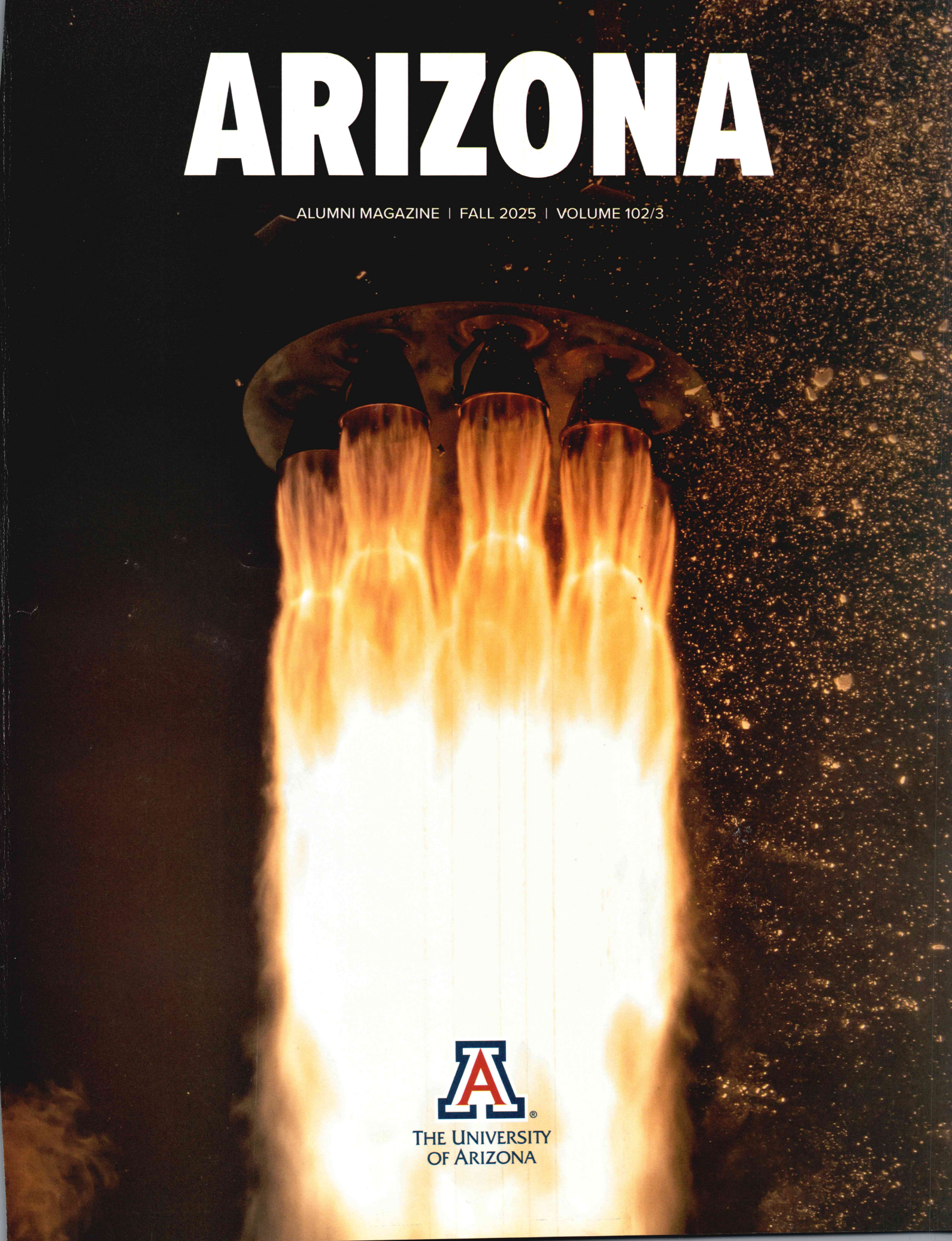

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ALUMNI MAGAZINE

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THIS PAGE
The famed "cactus logo" back on the court at the McKale Memorial Center.
Photo: Rebecca Sasnett

COVER
A Rocket Lab Electron rocket in action. Rocket Lab was selected by NASA to launch the U of A-led Aspera mission; the launch is currently scheduled for 2026. Learn more about the mission on Page 12.

Photo: Rocket Lab

16

If forecasts are to be believed, artificial intelligence is going to change just about everything, from how patients receive health care to how credit card companies detect fraud. Learn about the researchers and thinkers across the U of A adapting to this revolution in real time, from mining and space defense to agriculture and the humanities. Also, meet the U of A's inaugural chief AI officer, David Ebert.

POWERING CANCER PROGRESS

28

Nearly 10 million people die of cancer each year. Doctors and researchers at the U of A's Comprehensive Cancer Center — as well as the Mel and Enid Zuckerman College of Public Health, the Center for Advanced Molecular and Immunological Therapies (CAMI) and other initiatives across the U of A — have devoted their professional lives to figuring out what they can do about it. And they're making strides.

34

Since 2017, student volunteers from the Mel and Enid Zuckerman College of Public Health and the College of Medicine – Phoenix have been going into the streets of Phoenix to provide basic medical care to some of the most vulnerable people in the community. Learn how they are adapting to shifts in funding and legislation while keeping their mission clear.

ARIZONA
ALUMNI MAGAZINE

DEPARTMENTS

4 Leadership

6 Subject/Object

10 News Roundup

44 Sports

52 Class Notes

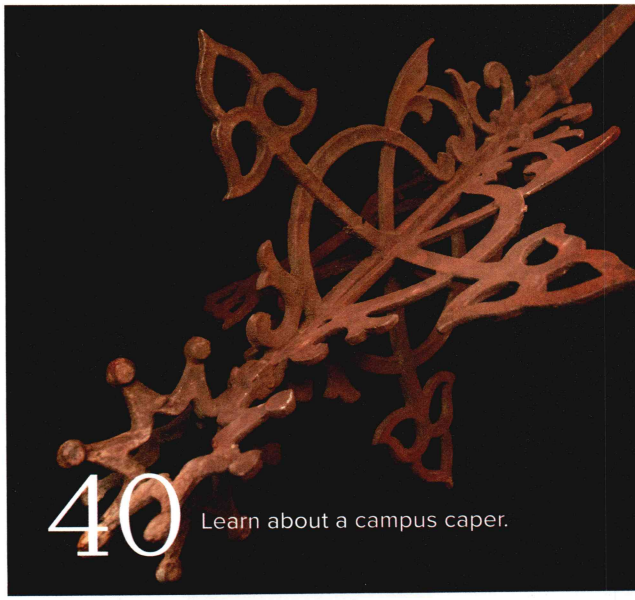
60 Reading Room

64 Wildcat Journey

68 Rearview

06 University Libraries are changing. Find out how.

22 The Center for Creative Photography has a big birthday this year.



40 Learn about a campus caper.

11 What's cool? Some preliminary thoughts.

A FRESH START

The U of A has balanced its budget. President Garimella describes how.

ORIGINALLY PUBLISHED IN THE ARIZONA REPUBLIC

PHOTO: **CHRIS RICHARDS**

When I became president of the University of Arizona last October, the institution had faced a challenging year.

It was struggling with a budget deficit of $177 million, negative press and low morale. It was clear that we needed to turn things around quickly.

Thanks to the contributions of many, we have re-envisioned how we operate and restored balance to our finances, positioning the university to truly fulfill its land-grant mission.

In the process, we have elevated our commitments to students, faculty, staff, and the communities and industries we partner with across Arizona.

I am pleased to share that we have eliminated the deficit, implemented tighter operational controls and built a stronger, more sustainable foundation.

We emphasized transparency and accountability

Starting this fiscal year, we are now operating with a balanced budget that provides well-deserved raises for faculty and staff. It also holds tuition flat for resident undergraduate students.

We will release the budget this fall.

These choices reflect our commitment to access, affordability and student success — and the fiscal discipline to sustain them.

When I arrived in Tucson, progress had been made, but our work was far from finished. We sharpened our focus and made difficult but necessary decisions.

This effort required close collaboration with the Arizona Board of Regents and dedicated work by deans, faculty, staff and administrative leaders across campus.

We approached the process with purpose, emphasizing transparency and accountability, while providing regular updates to rebuild trust throughout our university community.

Five strategies helped the U of A balance its budget

The university's turnaround enables us to boldly invest in our students and programs that engage every county across Arizona. Our success was anchored in five strategies:

1. **Operational efficiency:** We lowered operating expenditures by $95 million since 2024, driven by more than a 22% reduction in administrative costs. That allowed us to protect academic units, which saw reductions of only 3%. We also restructured university offices, improved the delivery of key campuswide services and optimized how we managed our facilities and billing systems.
2. **Revenue growth:** We increased net tuition revenue by more than $47 million thanks to strategic reforms in enrollment management and financial aid allocation. We also worked hard to increase university revenues from other sources by $11 million.
3. **Modernized athletics operations:** Arizona Athletics increased revenue by $12.5 million, reduced operating costs by $17.6 million and is adapting to a new national landscape with revenue sharing. New accountability standards provide long-term sustainability while we continue to prioritize support for our student-athletes and compete for national championships.
4. **Careful financial management:** We completed a debt refinancing to improve long-term cost efficiency and limited capital expenditures for the current fiscal year to maintain fiscal flexibility.
5. **Improved organizational performance:** Auxiliary units, including the campus store, housing, campus health and the student union, delivered stronger financial results.

Every college leader has access to budget data

While eliminating the deficit was a crucial milestone, we are continuing to improve the university's budget model to support responsible, transparent and data-driven management.

Today, leaders across every college and administrative unit have access to real-time financial data, creating a common understanding of the budget and enabling smarter fiscal planning. Revenues and spending are monitored throughout the year, building a continuous feedback loop that strengthens decision-making.

This collaborative approach establishes fiscal discipline within an environment of creativity and agility. It empowers leaders at every level to innovate and drive success.

The U of A now offers a three-year medical degree program at the Colleges of Medicine in Tucson and Phoenix to help address the state's primary care physician shortage, for example, as well as a one-year MBA program to help students advance and quickly enter the workforce.

We're enrolling students who will thrive at the U of A

Equally important, we have refined our enrollment strategy to prioritize academic outcomes and enable financial sustainability. This includes changes to the use of merit-based aid, aligning financial resources with student outcomes, and placing greater emphasis on retention, progression and graduation.

The goal is not the size of our incoming classes, but a focus on enrolling students who will thrive at the U of A and providing them with the support they need to graduate prepared for the workforce.

The University of Arizona educates more than 50,000 students each year.

The Center for World University Rankings places us among the top 0.5% of more than 21,400 colleges and universities worldwide, and Military Times ranks us among America's Top 5 institutions for service members.

We take great pride in contributing to the economic and social fabric of our state, building partnerships the deliver lasting benefits.

Eliminating the deficit and establishing a solid financial foundation is not the conclusion of the story, but rather the end of one chapter and the beginning of a brighter one.

We are building a better and stronger university because when the U of A thrives, Arizona does, too. ❖

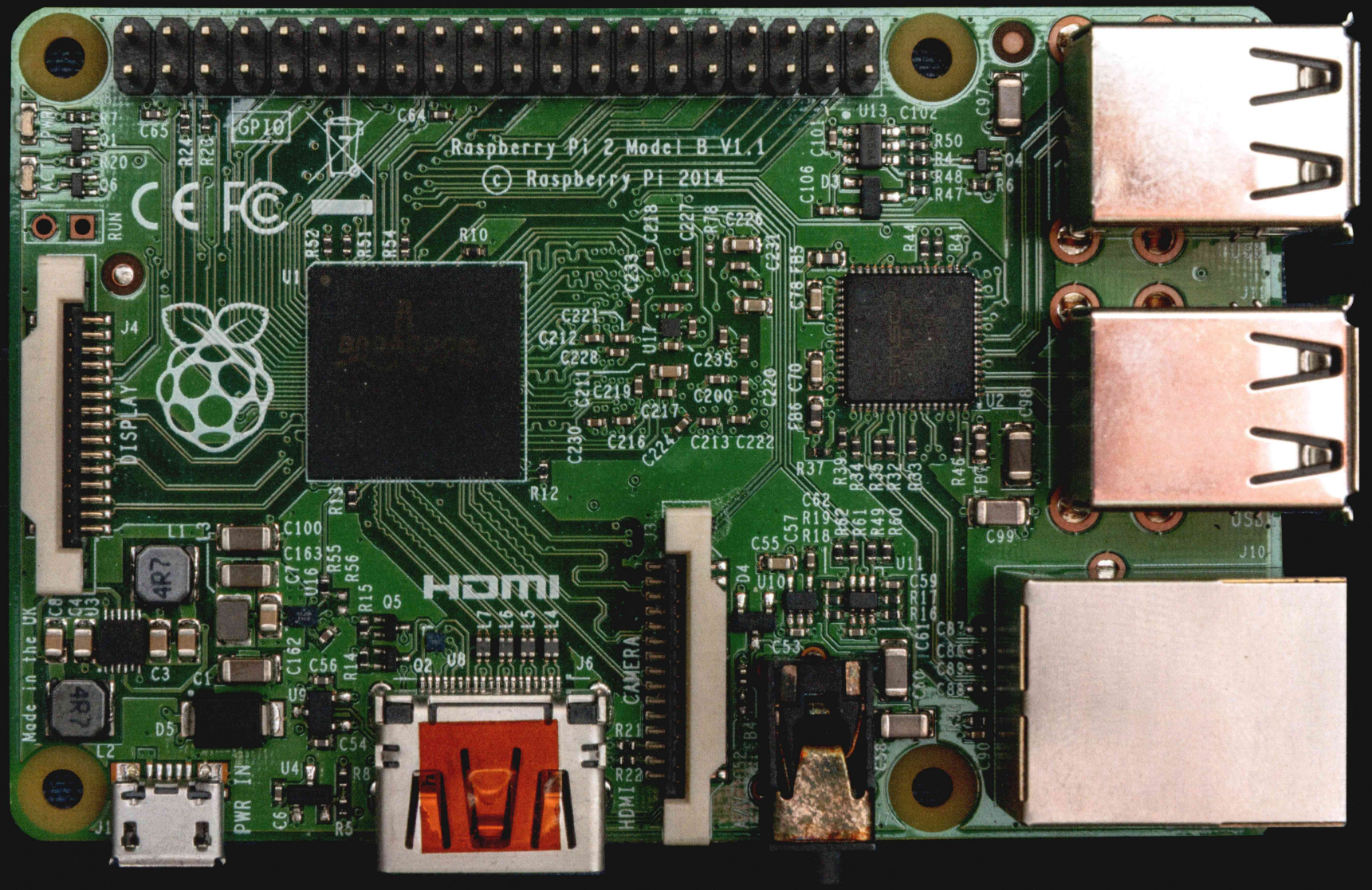
State of the University
Celebrating our First Year Together:
U of A 2024-25.

SUBJECT / OBJECT: RASPBERRY PI

STORY BY **MIKE POWELL**

PHOTO: **CHRIS RICHARDS**

In 2024, the University of Arizona Libraries loaned more technology devices (17,850 loans) than books, media, maps and other printed matter (17,782 loans). Some of these devices are probably familiar: laptops, tablets, Wi-Fi hotspots. Others point somewhere new. The Raspberry Pi is a computer about the size of a credit card originally developed by faculty at the University of Cambridge in England to teach computer science but that has since been used to build everything from arcade-game simulators to baby monitors. (This one was accessed from the Rhonda G. Tubbs Tech Toolshed on the first floor of the Main Library on a hot July afternoon.) It doesn't smell as good as an old book, and doesn't have quite the same mysterious, transportive feeling in your hands, either. But to the right mind, it can be just as expansive a tool. ❖


Raspberry Pi 2 Model B V1.1
© Raspberry Pi 2014
GPIO
DISPLAY
HDMI
CAMERA
PWR IN
Made in the UK
RUN

Tadeusz Borowski outside the Árbol de la Vida dorm, where he is a resident assistant

EMBRACING THE DETOURS

STORY BY **KYLE MITTAN**
PHOTO: **CHRIS RICHARDS**

After starting at the College of Medicine – Tucson at just 16, Tadeusz Borowski's curiosity has led him to unexpected roles as a resident assistant and lab research assistant.

Ask Tadeusz Borowski about his path to college and he'll probably mention his lifelong mission to "know the whys."

That curiosity drove him to graduate from high school at 15 and enroll in the University of Arizona College of Medicine – Tucson's bachelor's degree program. Now 18 — his birthday was in June — he's a rising junior minoring in Spanish and studying in the W.A. Franke Honors College.

When he arrived on campus from New River, just north of Phoenix, Borowski was focused on understanding giftedness — why some students, like him, moved quickly through school.

But his curiosity has led him toward other questions and experiences. He stepped into leadership as a resident assistant and in student clubs, and he joined a lab doing research at the intersection of artificial intelligence and health care.

He's also preparing for the MCAT and applying to the Honors Early Assurance Program, which offers early admission to the medical program at the College of Medicine – Tucson. For Borowski, who goes by TJ, it's all his idea of fun.

"I still have interest in understanding the whys behind gifted minds," he says. "But in general, I've always had an interest in the whys of everything. Since arriving on campus, I've found a lot of opportunities to ask why in broader contexts or found new and interesting things that I just want to dive into."

DEDICATED TO KINDNESS AND SERVICE

Borowski grew up in New River, racing through Advanced Placement and college-level classes to earn a high school diploma three years early.

He also showed an early penchant for kindness. In third grade, he began handing out goodie bags to recognize the hard work and service of his classmates and teachers. By high school, he was fundraising and organizing COVID-era relief efforts for families in need.

He came to the U of A on several scholarships, including a Phoenix Alumni Club Scholarship.

Living in the Honors Village his first semester, he was drawn to dorm events and quickly got involved. Last fall, he was a resident assistant at Likins; this fall, he's at Árbol de la Vida.

Originally planning to focus on neuroscience and psychology, Borowski has branched out academically. One favorite class walked students through clinical case studies on the social determinants of health disparities. He later served as a preceptor for the course, helping teach his peers while working closely with faculty.

Borowski also serves in three student clubs. He's a founding member of the upcoming Honors Medicine Academy, supporting honors students in the B.S. in Medicine program. He also participates in the Franke Honors Service Club, which focuses on community service, and the Medical Directive Club, which supports medical and pre-med students through events and programming.

"I don't see a reason not to help other people when we can all just come together to support each other to reach our goals," he said. "Especially in health care, that's how we make that field better."

EXPLORING THE WHYS OF AI AND HEALTH

Last year, while looking for a lab to join, Borowski discovered the university's Vertically Integrated Projects, which gives undergrads a chance to join long-term, faculty-led research teams. He applied for a spot.

He was soon working in a lab with Allan J. Hamilton, a U of A Regents Professor and renowned neurosurgeon. One project the team is working on involves developing a computer program that analyzes photos of students' suture pads and offers feedback on their stitching. Borowski began teaching himself to code after a coding workshop hosted by his research lab sparked his interest.

As a future medical student, he's motivated by how useful a tool like that could be across health professions.

"That is a very key skill, and having the ability for students to have their own suture pad, upload a picture and get immediate grading and suggestions would be huge," Borowski says.

Looking ahead to his remaining undergraduate years, Borowski plans to keep diving into research, service and leadership — and to remain open to whatever sparks his curiosity.

"I just keep those end goals in mind — becoming a physician — to figure out where something fits in my future career," he said. "I'm always looking for ways to make that connection so I can enjoy what I'm learning even more." ❖

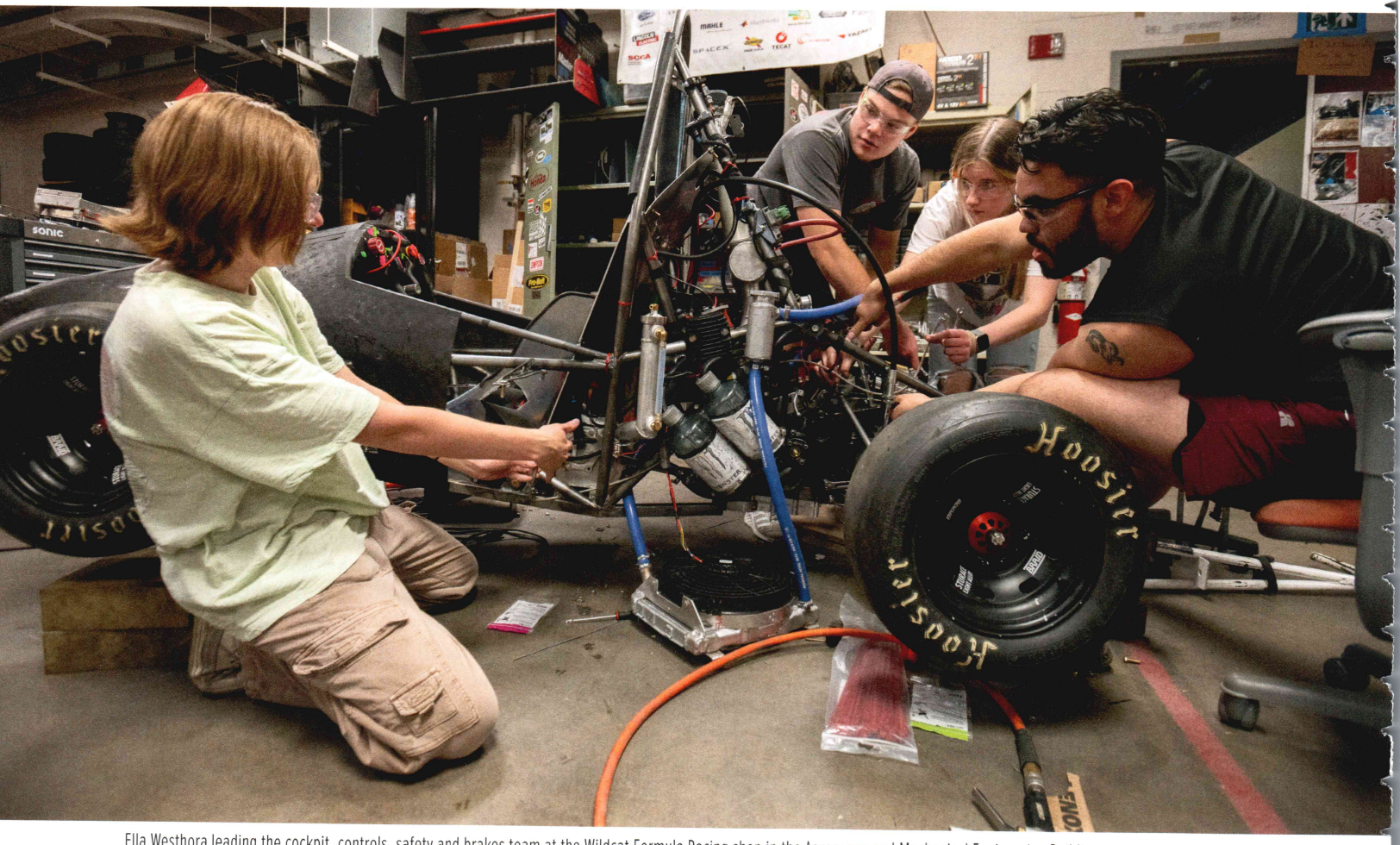
THE WILDCAT FORMULA RACING CLUB

STORY BY **LOGAN BURTCH-BUUS**
PHOTO: **CHRIS RICHARDS**

Ella Westhora is a biomedical engineering student starting her sophomore year at the University of Arizona and her second year with the Wildcat Formula Racing club, where she leads the cockpit, controls, safety and brakes team.

Wildcat Formula Racing designs, fabricates and builds a formula-style race car every year to participate in student competitions sponsored by SAE International (formerly known as the Society of Automotive Engineers). They work out of a shared shop in the Aerospace and Mechanical Engineering Building. Craig M. Berge, dean of the College of Engineering, says he sees the club as a powerful bridge between theory and practice that enhances both academic learning and student engagement.

"The SAE Formula team experience embodies the hands-on learning we value for our engineering students, while the competition also places a premium on design and analysis, further reinforcing classroom learning. It's always exciting to see the students at the competition, where all their teamwork comes together," he says. ❖



Ella Westhora leading the cockpit, controls, safety and brakes team at the Wildcat Formula Racing shop in the Aerospace and Mechanical Engineering Building.

A U of A researcher has the answers.

Story by **Andy Ober**

Most people know *cool* when they see it, but defining it is a bit trickier. New research from Caleb Warren, a professor in the University of Arizona's Eller College of Management, explores the psychology of cool and sheds some light on how people across cultures define *cool*.

Warren and his co-authors — Todd Pezzuti with Universidad Adolfo Ibáñez in Chile and Jinjie Chen with the University of Georgia — surveyed more than 5,000 people in 12 countries. Each participant was asked to evaluate non-famous people whom they considered cool, not cool, good or not good and to rate them on 15 values and personality traits such as extroversion, autonomy, warmth and conscientiousness. The study appears in the Journal of Experimental Psychology: General.

Around the World, Cool is Cool

Across countries, spanning a wide range of cultures, people described cool in surprisingly similar ways, consistently linking coolness with six traits: extroversion, hedonism, power, adventurousness, openness and autonomy.

"We expected to see some cultural differences," Warren says. "There were some minor variations, but overall, people across the globe associated coolness with the same traits. That consistency surprised us a bit."

The team gathered responses from participants in countries as diverse as Australia, Chile, China, Germany, India, Nigeria, South Korea and the United States.

Is It Cool to be Good?

The research found that cool and good are mostly distinct. Cool people were more likely to be described as extroverted, hedonistic, powerful, adventurous, open and autonomous. Good people, on the other hand, were more often described as conforming, traditional, secure, warm, agreeable, universalistic, conscientious and calm.

"Coolness and goodness are related, but they're not the same thing," Warren says. "Your grandma might be a really good person, but that doesn't necessarily make her cool. That distinction matters because it helps explain why we admire different people for different reasons."

Only one attribute — being capable — was seen equally as cool and good.

Why It Matters

Warren's interest in the topic began when he was a marketing student trying to answer the fundamental question: Why do people buy things? He found that the answer, often, was that they think it's cool.

"It's much harder to directly make your product or your company seem cool than it is to associate your brand with a cool person," Warren explains. "So this can help if an organization is looking to find someone who embodies these attributes to be the public face of the brand."

Warren says the implications reach beyond marketing.

"The research helps address important questions," he says. "How does the pursuit of cool affect our politics and the way we interact with each other? How does it impact the way we change cultural norms? To understand these things, we need to understand how people and things become cool."

Authenticity is Key

If you want to be cool, authenticity matters. Previous research Warren conducted shows that trying to be cool usually doesn't work and can cause someone to lose status in the eyes of others.

"With wealth, people tend to respect it more if they believe someone worked hard to earn it," Warren says. "Coolness works differently. If people think you're trying to be cool, you lose credibility. That's because coolness is about autonomy, originality and being unconcerned with fitting in." ❖

Rocket Lab photo

Story by **Mike Powell**

SMALL SATELLITE, BIG SHIFT

A U of A-led NASA small-satellite mission called Aspera is investigating how galaxies are formed. It's also quietly changing how missions of its kind might be conducted in the future.

In 2020, NASA announced an initiative called the Pioneers Program. The goal: to conduct compelling space science at lower cost using smaller hardware than similar missions in the past. Four missions were selected. Two of those missions are being led at NASA centers; two are being led at universities. Of the two being led at universities, only one will send a satellite into orbit. That mission, Aspera, is being led here, at the University of Arizona.

"U of A has been involved in NASA missions in the past," says Carlos Vargas, the mission's principal investigator and an assistant professor at the Steward Observatory. "NIRCam [the Near-InfraRed Camera on the James Webb Space Telescope], James Webb and such. But those were all managed elsewhere with involvement at U of A, or we've only managed the instruments. The whole kit and caboodle for Aspera is totally led and managed at the U of A. It's really the first of its kind."

Aspera's goal is to study the diffuse matter surrounding galaxies, known as the circumgalactic medium, to see whether and how it contributes to the birth of stars and planets. "Gas is the fuel needed to make stars," Vargas says. "We have a good understanding of how much gas there must be in galaxies to explain how many stars we see, but we've searched far and wide and still cannot find most of it."

The idea, Vargas explains, is that it might be somewhere in these peripheries. "Why do we care about that? Because every star that has formed, every planet that's formed, and all life on those planets must come from matter somewhere." Until now, Vargas says, astronomers have functionally just considered the gas "missing." Aspera is looking for it. "Without it," Vargas says, "we can't truly understand our origins."

Principal Investigator Carlos Vargas with students, surveying a 3D-printed model of the Aspera telescope in the Applied Research Building. Photo: courtesy of the Aspera team

Part of the mission's novelty is its scale. Aspera is a small satellite, or SmallSat, a relatively recent step in the evolution of satellite design with the capacity to reduce both size and cost while still conducting meaningful science. (Imagine a mini fridge studded with solar panels, housing a Steward Observatory-designed telescope; this, roughly, describes what Aspera will launch into space.) "Ten years ago, launching an Aspera-sized payload would have cost $50 million to $100 million," Vargas says; now, companies like SpaceX offer "rideshare" programs for small satellite payloads starting at $325,000.

Hardware and manufacturing have undergone similar shifts. "You don't need to have your own electrical engineering lab that costs the university $50 million to build and run," Vargas says. "You can buy off-the-shelf products instead" — military-grade and commercial spaceflight materials tested and modified for a mission's specific needs. The image is of something scrappy, resourceful, less scientifically monolithic than the flagship missions of NASA's past but nimble and dynamic in a way that suits space exploration's rapidly developing present. Missions like the Hubble Space Telescope took 10, 20, 30 years; Aspera's timeline is more like five.

The point isn't just to save time or money but to expand the conversation about how science can be produced. "If we can prove that [Aspera] works, that effectively gives free rein to a huge slew of new people, new brains and new universities to be part of the space science process," Vargas says. That might mean headier, more remote-seeming missions like Aspera, but it could also mean researchers in developing nations producing satellite imagery to help predict agricultural yields instead of relying on externally run satellites. "A mission like Aspera actually helps democratize access to space," Vargas says. "That's kind of pie-in-the-sky, but it would inevitably lead from proving that small satellites can have a huge impact."

The project also has offered opportunities to student workers — 37 so far — who, Vargas says, go way beyond the norm. "Our flight software is entirely built by students. They design it all, they test it all, they write it all. Of course, we have people to support and mentor them," he says, including astronomy professor and deputy principal investigator Erika Hamden. "But at the end of the day, it gives them real experience."

Some have gone on to work at places like Amazon and Raytheon; others, like Ellie Wolcott, have continued in research. "My first day on the Aspera mission was actually my last day of high school," says Wolcott, now a research engineer at Georgia Tech. "That's four full years of working on a space mission — an experience I don't think many of my classmates had."

But for Sooseong Park, the most remarkable part of the work was being treated like a peer. "If my opinion seemed efficient, colleagues would accept my suggestions and apply them," she says. "I truly felt like I was part of this field." ❖

A CLEARER VISION

Undergraduate researcher Tom Pham is working with his mentor, Abhijit Date, to improve how medicine gets into our eyes.

STORY BY **ZOE MONTAÑO**

PHOTO: **CHRIS RICHARDS**

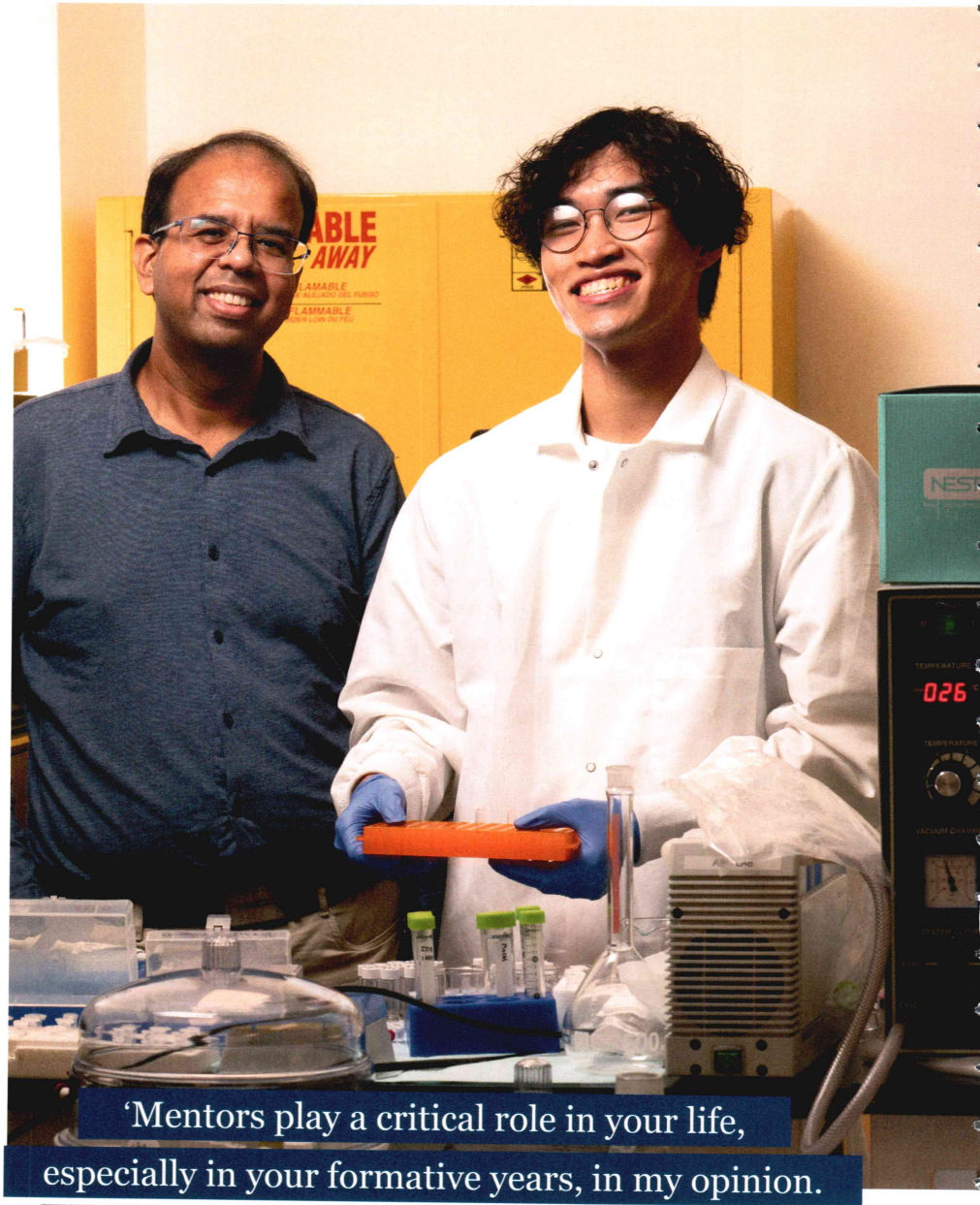
Eye drops may seem easy to use — until you're the one trying to use them.

You tilt your head back, try not to blink and hope that the drop lands in just the right spot.

Plus, an antibiotic like moxifloxacin, often prescribed for an eye infection or after cataract surgeries, has limited ocular absorption and is quickly cleared by the eye's natural tear film. As a result, patients often need to apply it up to three times a day, a routine that can lead to frustration and inconsistent use, especially in patients who require long-term ocular antibiotic eyedrops after cataract surgery.

This challenge is the focus of University of Arizona researcher Tom Pham '25 and his mentor, Abhijit Date, an associate professor of pharmaceutical sciences. Under Date's leadership, they are converting moxifloxacin into an ionic liquid by combining it with safe, FDA-approved counterions, including those found in the tear film. This strategy improves its penetration into the eye. Efforts are also underway to enhance its retention, aiming for once-daily eye drops and better patient adherence.

"The eye is a beautiful organ, but it's designed to keep things out," Pham says. "You have your tears which are always trying to wash everything out. You have the cells



'Mentors play a critical role in your life, especially in your formative years, in my opinion. If you get the right mentors at the right time, I think that can go really a long way.'

in your eyes that are really thick, so it's really hard to get drugs through and get them to where they need to be."

Pham began the project as a junior through the U of A's Undergraduate Biology Research Program (UBRP), which connects undergraduates with mentors to conduct self-directed research. After applying to the program, Pham says, he was handed a list of 200 potential labs.

"It's kind of like a dating app, where you talk to them and they talk to you, you tell them what you like and they tell you what they want from you," Pham says. "When I talked to [Date], our conversation stood out because he was the only person who listened to my story."

"His first question was, 'So, what can I do for you?'" Pham recalls. "This guy, who's an esteemed professor, is asking me, Tom Pham, what he can do for me. It's nuts. It kind of goes to show the kind of person that he is. He leads with such immense compassion. I think that's how I knew right away that I had to work under him."

Pham was born in Saigon, Vietnam, and moved to Mesa, Arizona, at 14. When he enrolled at the U of A, becoming a pharmaceutical researcher was not his plan. But he quickly discovered that through science he could channel his curiosity, something he says often got him into trouble as a kid.

"I've always been a curious kid, and I think it got me into more trouble than I was worried about," Pham says. "I was always skipping school and exploring the city I lived in. I was building stuff out of scrap. When I started college, science gave me so much direction and a whole tool set I can use to fulfill that curiosity."

Conducting research also gave him a way to positively impact others, a value he says was instilled in him by his parents.

"My parents motivated me to recognize my unique gifts and channel it into uplifting others," he says. "In our research, we are harnessing nanotechnology to significantly change how medicine is accessible, especially to the most underserved communities across the world. I'm incredibly lucky to do something that feels like an extension of my values and informs my career aspirations."

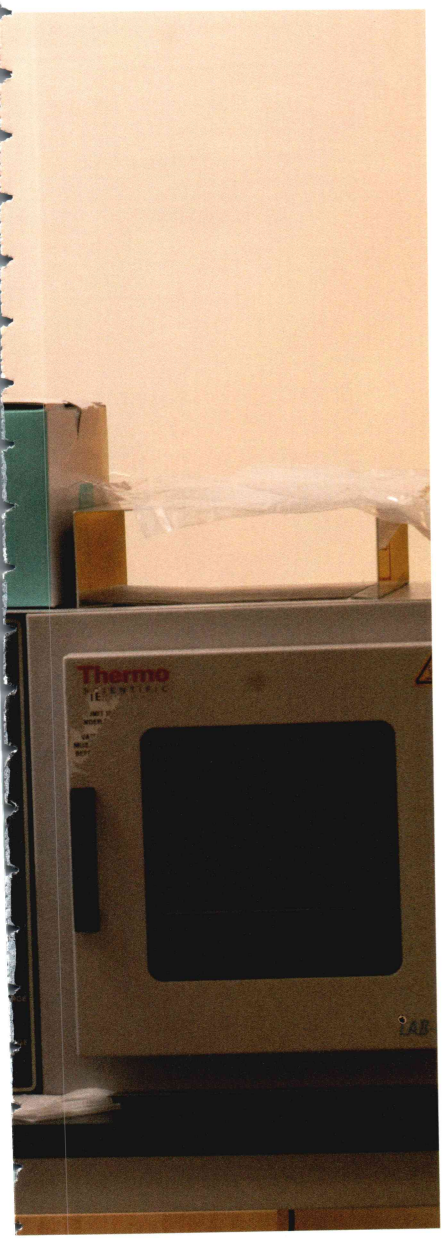
Date, a pharmaceutical scientist by training, completed his undergraduate, graduate and doctoral work at the University of Mumbai before coming to the United States 15 years ago to pursue postdoctoral research in drug development and delivery. Since then, he has led research on nanomedicines and drug repurposing, earning both patents and national recognition.

For Date, being involved in UBRP is a way of paying forward his own experience as a mentee during his undergraduate years.

"I was fortunate enough to have undergrad mentors who really believed in whatever ideas I had," Date says. "Mentors play a critical role in your life, especially in your formative years, in my opinion. If you get the right mentors at the right time, I think that can go really a long way."

Pham plans to apply to medical school in the coming years, but he says Date's guidance will stay with him forever. For Date, seeing students like Pham develop through research is what he finds most meaningful.

"Research teaches you perseverance and patience beyond techniques and logic," Date says. "You could use any of these qualities in whichever stream that you choose. I look at it from a broad experience perspective. If they continue research, that's wonderful, but as long as they enjoy their time in the lab and use some of the learning experiences for their next journey, I'm more than happy." ❖

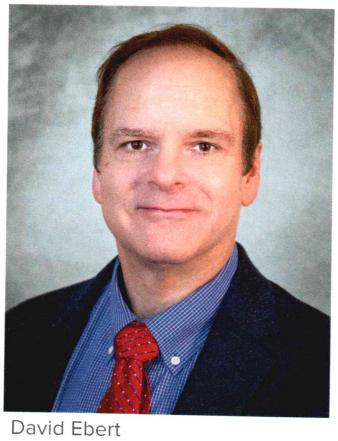


Tom Pham [R] and mentor, Abhijit Date.

AI WITH PURPOSE

ARIZONA NAMES FIRST CHIEF AI OFFICER

STORY BY **STEPHANIE DOSTER**

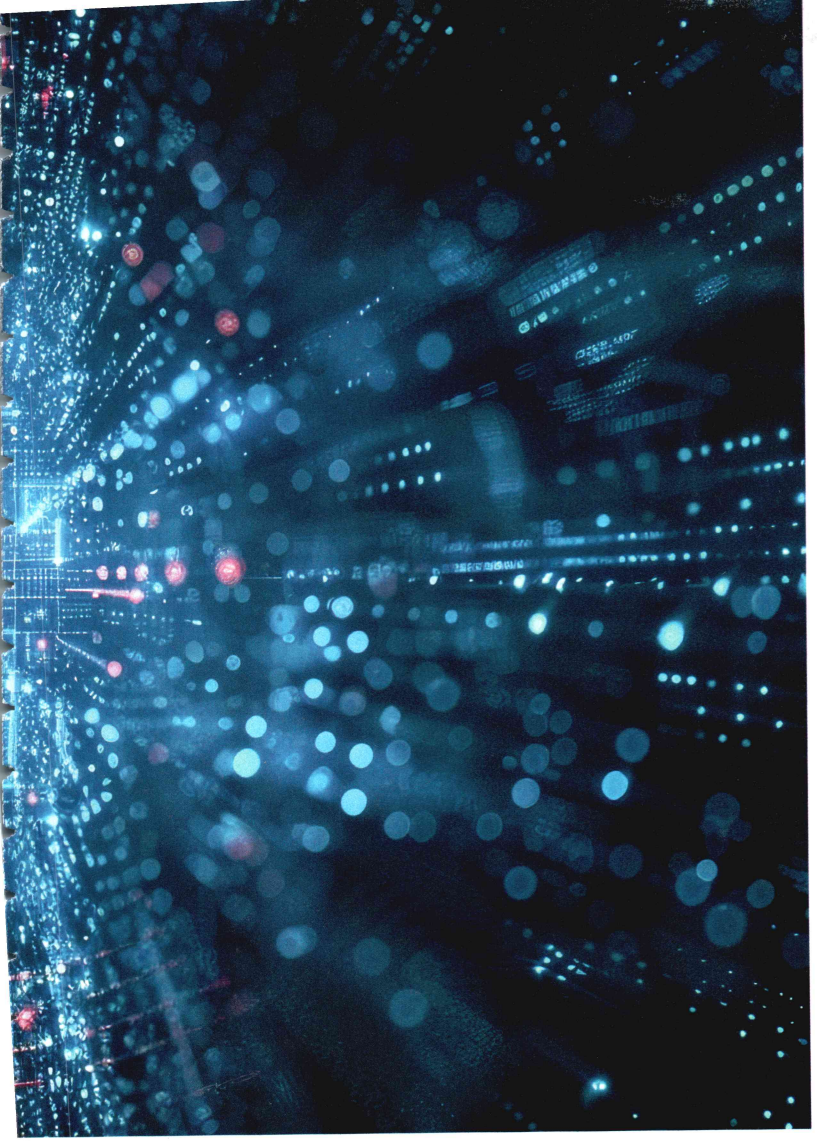


David Ebert

Artificial intelligence is rapidly reshaping how we live, from health care and water resources to education and national security. At the University of Arizona, AI is becoming integral to how we learn, teach, research and serve.

Leading this integration at the U of A is David Ebert, named in May as the university's first chief AI officer (CAIO), a position still rare in higher education but increasingly essential.

A global leader in human-centered AI, data visualization and human-centered computing, Ebert brings a collaborative, interdisciplinary vision for accelerating and guiding an AI transformation across campus. He previously served as director of the Data Institute for Societal Challenges at the University of Oklahoma and now holds the inaugural Computer Science Engineering Endowed Innovation Chair, established through a $3.5 million anonymous gift.



Ebert sees the U of A becoming a national model for how AI and data science can empower cross-disciplinary teams to solve real-world problems while preparing students and communities for an AI- and data-driven future.

"AI is impacting everything in higher education, from compliance and curriculum to student services and research," he says. "With the right strategy, the U of A can lead more than ever before in turning knowledge into real-world impact, ethically, responsibly and transparently advancing industry, society and student success."

INSTITUTIONAL MOMENTUM

New leadership and strategic priorities are accelerating the university's AI trajectory. President Suresh Garimella has outlined three key imperatives: success for every student, research that shapes the future and community engagement that creates opportunity. AI aligns with all of them.

Additionally, a $20 million investment by the Arizona Board of Regents will drive innovation in high-impact areas: sustainable mining and critical minerals, space sciences and national security, fusion energy, and AI-driven health care.

Ebert and his team, guided by input from across campus, are building a comprehensive, university-wide AI road map. It will integrate innovation, research, education and operations across disciplines, from biomedical, physical, social and optical sciences to humanities, agriculture and the arts.

"This road map reflects our commitment to the land-grant mission. We're applying AI to enhance clinical care, reimagine curriculum, accelerate research and modernize operations, ensuring the U of A leads responsibly in this transformative era," Ebert says. "We also need to remember that soon, incoming students will have been raised using data and AI tools. They will be AI-native, and we must ensure that we provide top-notch education and training to prepare graduates for future careers."

Ebert also is creating an AI and data science institute that will unify existing data-focused programs in the Office of Research and Partnerships, and he is developing the initiative centered on AI in health care.

AI FOR IMPACT

The university is already leveraging AI to revolutionize medicine. Faculty and researchers are developing tools for earlier and more accurate diagnoses, improved patient-provider interactions, and faster, smarter drug discovery. Among the leaders in this area is Dan Theodorescu, director of the University of Arizona Comprehensive Cancer Center, who is featured separately in this issue (Page 28). His research applies AI to identify new biomarkers, personalize therapeutic options and predict patient responses to therapy.

Highlighted in this AI section are other research applications already in motion: mining safety; innovations in agriculture, space sciences and national security plus wearable health technologies; and thoughts on the intersection of humanities and AI.

"I am not exaggerating when I say that data is changing everything," Ebert says. "The ability to manipulate and understand data is now critical to discovery and innovation. Data science and AI are the key drivers turning knowledge into impact in Arizona, across the U.S. and around the world, and I am proud to be a part of it."

NATIONAL SECURITY

STORY BY **STEPHANIE DOSTER**

Roberto Furfaro

As threats in orbit grow more complex, the U of A is advancing national security through cutting-edge AI research that will support space situational awareness, satellite tracking and planetary defense.

Roberto Furfaro works in extreme environments. From punishing hypersonic speeds to the increasingly congested orbital space between Earth and the moon, the systems and industrial engineering professor is applying artificial intelligence to tackle the complexity inherent in aerospace defense and space traffic management.

Furfaro, head of the Space Systems Engineering Laboratory and deputy director of the Space4 Center, is in the vanguard of AI research focused on improving national security and space safety. His team is developing intelligent systems that can predict and track the motion of objects in space and enable vehicles and satellites to make decisions in real time — without human involvement — under high-risk conditions.

"We're building flight systems that don't just follow instruction: They learn, adapt and respond to uncertainty like a pilot would," Furfaro says. "That's what autonomy means when you're operating in an unpredictable, high-speed, high-stakes environment."

In the hypersonics field, Furfaro is completing a three-year, $4.5 million grant from the U.S. Department of Defense to develop improved AI-driven guidance, navigation and control systems for vehicles traveling at speeds greater than Mach 5 — more than five times the speed of sound. These include interceptors, which are high-speed, maneuverable vehicles designed for defense against high-speed threats. Furfaro's research involves training systems to act as onboard brains that can rapidly adapt to shifting trajectories and withstand extreme heat, turbulence and shockwaves.

The Joint Hypersonics Transition Office, through the University Consortium for Applied Hypersonics, sponsored the research, which includes collaborators from the U of A College of Engineering, the University of Texas at Austin and the RTX Corporation (formerly Raytheon Technologies Corporation). Researchers gathered data from simulations and wind tunnel tests to characterize how vehicles behave in hypersonic flow and to create a simulated environment for training the adaptive brain of the system.

Beyond Earth's atmosphere, Furfaro is applying similar AI techniques to space traffic management and defense. Space is becoming increasingly crowded with satellites and debris — defunct rocket bodies and smaller objects like paint flecks. An estimated 20,000 to 100,000 new satellites could launch over the next decade, creating hazards to astronauts, spacecraft and communications.

Furfaro's lab uses machine learning to better detect and track space objects and predict their trajectories. The team focuses on objects in the geostationary belt, about 22,000 miles above Earth, and in cislunar space — the volume of space between and around Earth and the moon.

His team also is building and testing AI-integrated telescope systems that can interpret observational data, reprioritize targets in space and direct the telescopes autonomously, in real time — a critical capability in scenarios in which human operators are unavailable or delayed.

"Intelligent systems are becoming essential for managing space as it becomes more contested and congested," Furfaro says. "We're working toward predictive capabilities that anticipate threats and enable real-time response with no human in the loop."

MINING

STORY BY **ERIC VAN METER**

One of the most technologically advanced industries today, mining and mineral extraction requires highly skilled workers. The university is prioritizing the health and safety of these workers, using AI and machine learning to reduce accidents and injuries in underground mines while training the next generation of mining engineers.

"There are many opportunities to obtain data in the mining industry," says Nathalie Risso, assistant professor in the U of A's Department of Mining and Geological Engineering. "The data can be numbers, images or video and help us learn how something works to make it better."

Risso led the development of an algorithm to visually scan worksites for issues with personal protection equipment (PPE) compliance. To train the algorithm, a campus-wide invitation rapidly populated a database of more than 2,000 photos of students and U of A community members in mining gear, ensuring diversity representative of multinational mining workforces.

Researchers also have created an app that allows anyone — even those without safety expertise — to use smartphone cameras to determine risks for mine collapse and falling rock. Users capture video or photos that an algorithm analyzes in real time. The university's San Xavier Underground Mining Laboratory provided visuals to train the algorithm, and the app will crowdsource more data from ongoing use, continually refining its sensitivity to hazardous conditions.

The co-existence between manned and autonomous equipment, like massive haul trucks, presents another safety challenge. Risso's team is developing training methods to prepare new workers to interact with mining robots in a safe and effective manner by taking advantage of AI and virtual and extended reality. Her team also is using AI to train autonomous drones and robots for rescue missions. These devices can help evaluate injuries, identify hazards such as toxic gases and locate safe exit routes to help coordinate rescue teams.

These innovations have potential use in any high-risk emergency (think earthquakes or nuclear plant malfunctions) as well as non-crisis scenarios, potentially including extraterrestrial mining operations to provide water and resources for space exploration.

AGRICULTURE

STORY BY **ERIC VAN METER**

Through partnerships between the Arizona Experiment Station, Cooperative Extension and YCEDA, the U of A is working hand-in-hand with growers, industry and local leaders to ensure solutions are practical and scalable. The result? Yuma is becoming a global proving ground for AI-powered agriculture, helping producers worldwide navigate shifting climates, limited resources and the demand for sustainable, high-yield food systems.

When Tanya Hodges sees giant robots gliding through Yuma's lettuce fields, distinguishing crops from weeds in milliseconds, she doesn't just see machines. She sees the future of farming.

"Yuma's agricultural landscape offers an unparalleled opportunity to serve as a test site for ag-tech implementation," says Hodges, who leads the U of A's Yuma Center of Excellence for Desert Agriculture. "The region's diverse climate and cropping systems make it an ideal environment for a testbed for innovations in specialty crops and arid agriculture."

Traditional farming in Yuma County has long relied on manual labor for essential tasks like weeding. But as younger generations seek different careers and border restrictions tighten labor availability, technology is filling the gap.

"Instead of hoeing by hand, automatic weeders and thinners are now being developed," Hodges explains. "That's all through AI and pixels — pictures that teach these systems to determine what a weed looks like versus what a lettuce plant looks like."

The robots — which can work up to 12 crop beds simultaneously — represent just one application of AI in Yuma's evolving agricultural landscape. The U of A is also working with ag-tech companies using AI to distinguish beneficial insects from harmful ones, precision that matters because modern integrated pest management aims to maintain a balanced ecosystem rather than to eliminate all insects.

Water management is another frontier where AI is making an impact. Yuma's agricultural systems are already 84% to 90% efficient in water use, but AI-powered sensors could push that efficiency even higher — a critical advantage in the arid Southwest.

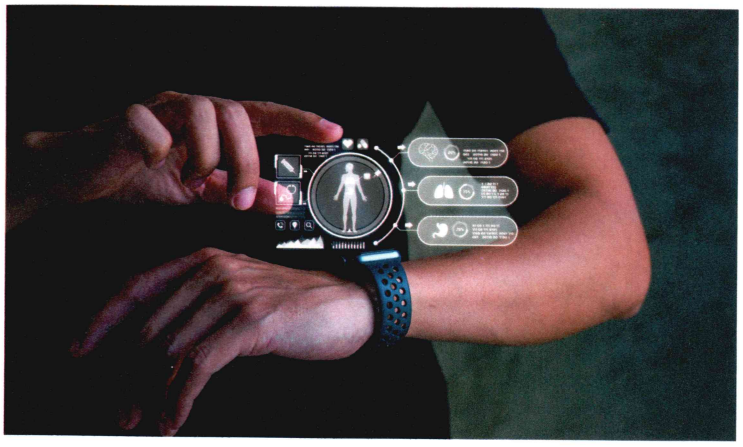
The U of A's commitment extends beyond the field through a network of partnerships, facilities and infrastructure designed to fast-track innovation. The Yuma Agricultural Center functions as a real-world lab for testing and refining agricultural technologies, while the annual Ag Tech Conference will showcase emerging tools directly to farmers.

AI-driven agriculture depends on massive data flows, from high-resolution crop images to real-time soil analytics. To enable this, the U of A and its partners, with support from state and county funding, helped launch a broadband expansion and smart farm initiative. This initiative is building a wireless network, anchored by more than 30 planned broadband network towers across Yuma's greenbelt. Once complete, the system will provide high-speed connectivity to over 180,000 acres of irrigated farmland, creating a countywide fiber backbone and the largest connected tract of agricultural land in the country for precision agriculture innovation.

The effort positions Yuma not just as a center for ag-tech, but also as a testbed for the future of farming worldwide.

HEALTH CARE

STORY BY **STACY PIGOTT**



The combination of AI and wearable devices provides new opportunities to improve health through research. U of A researchers are harnessing data to detect stress and transform how we monitor our health — before symptoms appear.

Anyone who owns a car knows that when the check engine light comes on, it's time for a look under the hood or a trip to a mechanic. The human body doesn't have a check engine light, but wearable sensors could fill that role for people thanks to the power of data.

"Most of us wear health and fitness trackers on our wrists or fingers, and that's an amazing window into our biology and how we operate," says Shravan Aras, assistant director of sensor analysis and smart health platforms at the U of A Center for Biomedical Informatics and Biostatistics.

Aras, who also is an assistant research professor at the Mel and Enid Zuckerman College of Public Health, wants to help fellow scientists get the most out of wearable sensors by incorporating them into research studies and optimizing how the data they capture is explored and analyzed. The timing is perfect, as the growth of AI and machine learning has created tremendous opportunities for advancement.

Aras earned a doctorate in computer science from the U of A. Over time, his research focus has shifted from space and satellites to the data collected by wearable sensors. He currently is part

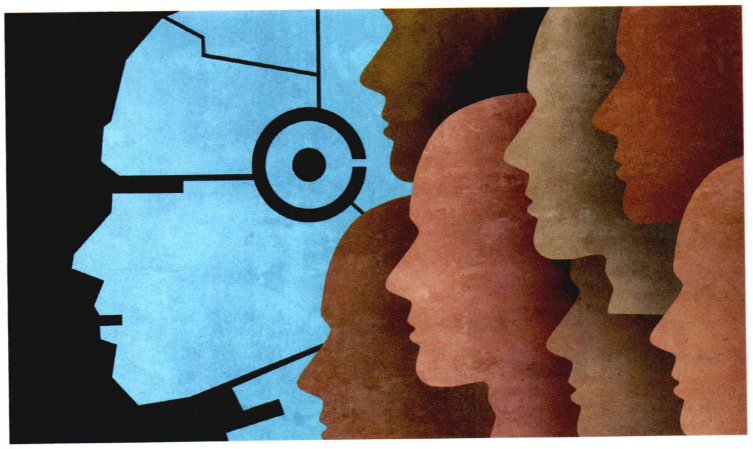
of a study — along with Esther Sternberg and J. Ray Runyon of the U of A's Andrew Weil Center for Integrative Medicine — using AI to assess people's stress response via digital, sweat-based biomarkers.

Projects like this are the tip of the iceberg when it comes to using AI for health sciences research. Aras says AI lets researchers gather and handle significantly more data in a faster and more accessible way than before. And by combining AI with wearable sensors, Aras aims to shift health care from reactive to proactive — using data not just to monitor, but to predict.

"My goal is to be able to predict things that are nonsymptomatic and do it in a proactive manner rather than doing it reactively, where you're trying to always keep treating the symptoms," he says. "I want to be able to predict, using sensors, that something is coming."

HUMANITIES

STORY BY **MIKE POWELL**



When we talk about the everyday applications of AI, we tend to frame them in terms of science or tech: The molecular models that help predict the toxicity or efficacy of prospective drugs, the algorithms that refine and accelerate our weather forecasts, the super-evolved fraud-detection software, and so on. But the implications of AI technologies as they evolve raise fundamentally human questions: Can AIs have emotional lives they can recount for others? Can they build and maintain meaningful relationships based on trust and vulnerability? Can they be funny?

Ken McAllister, a professor and the associate dean of research and program innovation in the College of Humanities, is one of dozens of scholars at the U of A who have spent no small part of their careers exploring such questions. To him, now is just another exciting moment in the long, strange story of us.

"If somebody were to just ask me what the relationship between AI and humanities is, I'd say they're inextricable and they've always been inextricable," McAllister says. "This creates lots of inroads for people in the humanities. It's culture; it's spirituality; it's communicating with people who don't speak our language — these are the things that people in the humanities have devoted their life to thinking about, analyzing and advancing."

"People get fixated on the machinery," he says. "We focus on the accuracy of the printing press, or the speed of the steam-driven loom, forgetting that these machines — including today's massive data centers — are mediators between parties. Humanities researchers interrogate the troubles and triumphs that attend those mediations, and signal to society when opportunities and dangers impend."

Language translation, for example.

Or using predictive analytics to reconstruct lost buildings, or tireless customized tutoring on any subject. AI might surpass the human race; it also might just become another very useful tool. "My own perspective is that this is a liminal moment, a threshold," McAllister says. "The human race has lived through many, many of these, where there's a lot of anxiety about what's going to happen — that we're going to be replaced or die off." So far, we always end up lasting longer than we expect.

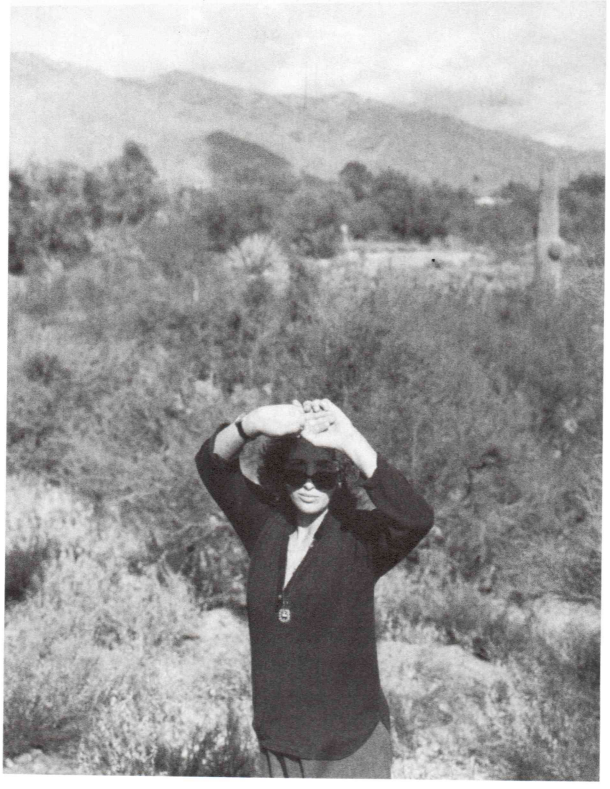
McAllister says one of the thrills of being in a moment like this is that the machinery of change is still visible enough to observe and question, whether our interests are environmental (what impact will AI have on energy and water usage?), material (how will AI affect the cost and production of human labor?), or otherwise.

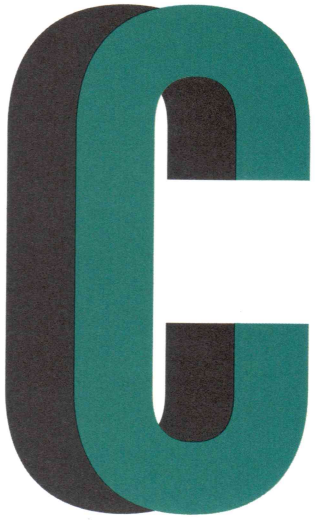
"Once we get a little further across the threshold and the door to the machine room starts to close, questions about how things work get much more difficult to answer — and to ask."

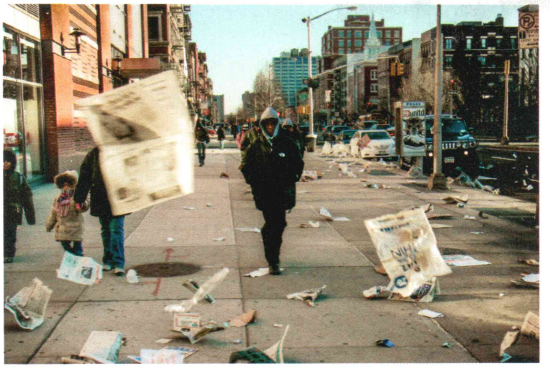
For his part, McAllister remains optimistic but says he tempers that optimism with activism. "The tremendous good that can come from these technologies is there for everyone to see," he says. "And people are seeing it.

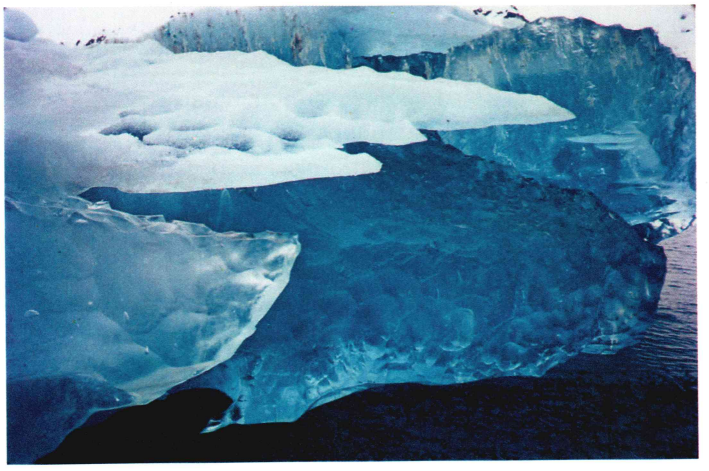
"But we have to drive innovation in good's direction. It has to be worked toward." ❖

PICTURE PARTY



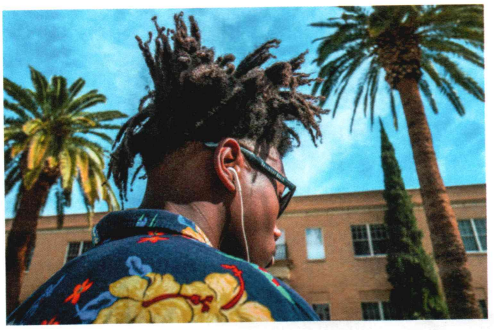


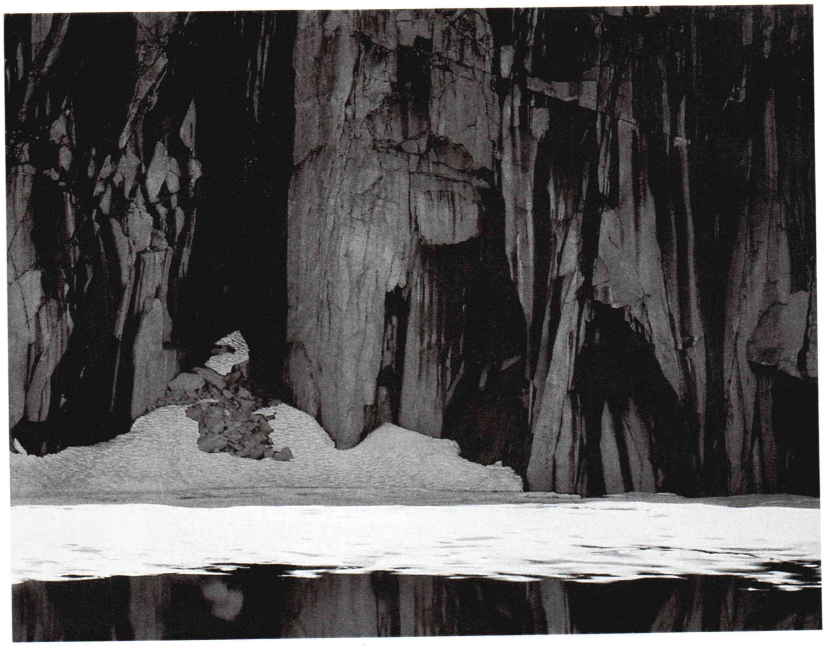




Story by **Margaret Regan**

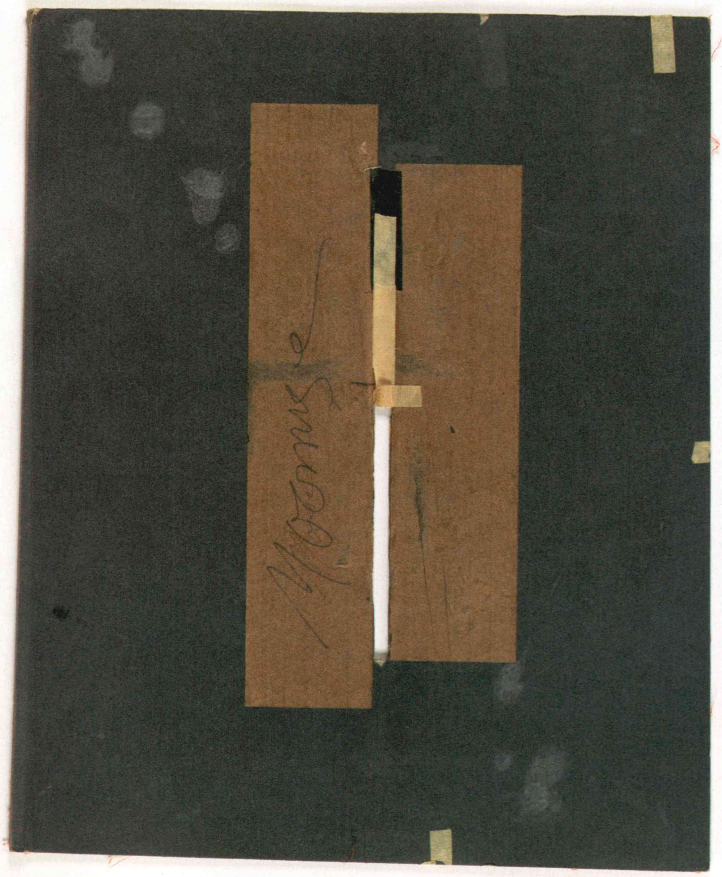
Celebrating the Center for Creative Photography's 50th Anniversary





Rebecca Senf '94 and Emilia Mickevicius. Photo: Chris Richards

One burning tool. Ansel Adams archive, AG 31, Box 805. Center for Creative Photography, The University of Arizona, Tucson, AZ



The Center for Creative Photography celebrates its 50th anniversary this year with a new exhibition, "Picture Party," curated by **Rebecca Senf '94 and Emilia Mickevicius.**

Theirs is a happy collaboration. "Something exciting happens when you look at pictures together and not just alone. You can see shared trains of thought between different artists across time," Mickevicius explains.

"Imagine entering a party; there's buzz in the atmosphere. Small groups of people are talking and there's a kind of raucous chorus in the background. That's what we were thinking about in calling it 'Picture Party.'"

On the gallery's back wall, there's a striking portrait of a young man — eyes closed, drooping mustache, slicked-back hair. It's a self-portrait by Harold Jones, the founding director of the CCP. He arrived in Tucson in September 1975, just 35 years old, and headed the CCP for two years before moving over to the art department to build its photography program.

Jones also was a volunteer with the CCP's Interviews and Oral Histories Collection, a combination of interviews, lectures, gallery walk-throughs and workshops with visiting photographers, curators and scholars.

The CCP was created by former University of Arizona President John Schaefer and the late Ansel Adams in May 1975. Today the collection holds some 120,000 photographs and 300 archives. Senf and Mickevicius had the daunting task of selecting just 100 pieces for this show.

Perhaps the most famous photograph in the collection is Ansel Adams' "Moonrise, Hernandez, New Mexico." It's not in the show, but **a tool that Adams constructed** to make the print is: the burning board used in the darkroom to manipulate light exposure.

It's Mickevicius' favorite object on display. "It is literally one of a kind, a custom tool that not only gives us a behind-the-scenes look into how Adams printed that iconic image but also an object that he had a very tactile, embodied relationship with as he worked."

The tool is a single piece of cardboard with a rectangular aperture cut through it. It looks like something you might throw away, but it's the essential tool that enabled Adams

to produce his elegant landscape with that bright streak of light set off from a very dark night sky.

Ask Senf for a favorite and she'll tell you it might be Mariana Cook's portrait of **Barack and Michelle Obama** taken in 1996, when the future president was a community organizer and preparing to run for his first term as an Illinois state senator. "I'm struck by their body language. Barack leans back, his face open. Michelle, on the other hand, has her chin tucked down and her body is between the camera and her husband, in a defensive stance. I've always thought that Michelle is thinking, 'If you want him, you're going to have to get through me.'"

Women are well represented in the show, both as photographers and as subjects. A strikingly pretty color print by Lucy Capehart stands out on the back wall. It's a portrait of the Navajo weaver Sarah Natani. She's holding a newborn lamb in a rustic corral on a sunny day in Shiprock, New Mexico, with a lovely cloudless blue sky in the background.

Famous Mexican photographer Graciela Iturbide joins the party with **"Señor de los Espejos,"** a portrait of a man carrying two mirrors that reflect images of a busy public square in Quito, Ecuador.

Laura Gilpin is a celebrated photographer and writer of the American West, known especially for landscapes and portraits of Navajo and Pueblo peoples. Here, her platinum print "Illustration for Eliza M. Swift's Poem, 'On the Prairie'" shows a solitary woman in a flowing white dress in a dreamy prairie landscape.

One of my favorites is Nancy Floyd's "Evolution of the Typewriter, 1983-2013." It's a print of six self-portraits taken over 30 years, from age 27 to 57. They reveal a creative woman at home surrounded by the objects of her work, from a manual typewriter to a laser printer.

Elsewhere in the gallery are two prints by famous Civil War photographer Mathew Brady. One is a portrait of Gen. David Birney. The other appears at first glance to be a forest scene, but hidden behind the trees a crowd of men is lined up in front of a military hospital. These prints were not made by Brady himself, but by Ansel Adams, long after Brady died.

Mariana Cook, *Barack and Michelle Obama*, Chicago, Illinois, May 26, 1996. Gelatin silver print, selenium tone ©Mariana Cook

Graciela Iturbide, *Señor de los Espejos,* Quito, Ecuador, 1982. Gelatin silver print Center for Creative Photography, University of Arizona: Purchase ©Graciela Iturbide

Nearby is work by another photographer famous for Western landscapes, Mark Klett. Klett and his collaborators launched the Rephotographic Survey Project in the 1970s, returning to the exact locations where 19th century photographers like Timothy O'Sullivan took their photographs. On display here are small facsimiles of photos of Chicago Lake in Colorado, alongside the same scene photographed by Mark Klett, ingeniously displayed on top of topographic maps.

Photojournalist David Hume Kennerly was just 25 when he won the Pulitzer Prize for his battlefront coverage of the Vietnam War. In 2019, the CCP acquired his entire archive of nearly one million artifacts, including prints and memorabilia such as the combat helmet he wore during his years in Southeast Asia. That's on display, sharing a case with Ansel Adams' iconic Stetson.

Charles "Teenie" Harris was an African American photographer from Pittsburgh, known for his portraits of everyday people. His archive is now at the Carnegie Museum of Art. In 1941, Harris made a portrait of a young Black soldier, Eddie Jackson, which is included in the CCP show. Jackson is in a dress uniform, with corporal stripes on his sleeve, holding a collection of military medals. In the background is a framed certificate recognizing his service in England during World War II.

Another Pulitzer prizewinner represented in the show is African American photographer Ozier Muhammad. His print, "Blown Headlines," captures a lone man in a hooded sweatshirt walking on 125th Street in Harlem on a windy, bitter-cold day in 2006.

A really fun party is lively and unpredictable. The 100 objects and images in this show offer plenty to spark conversations among eager party-goers: from Edward Weston's wedding ring to Lola Alvarez Bravo's sunglasses; from the chubby cheeks of a Chinese baby to black-and-white studies of a clenched fist, a bended knee and a naked torso.

As Senf puts it, "This is truly just the tip of the iceberg of what the collection can do and its potential. And that, for us, feels really exciting." ❖

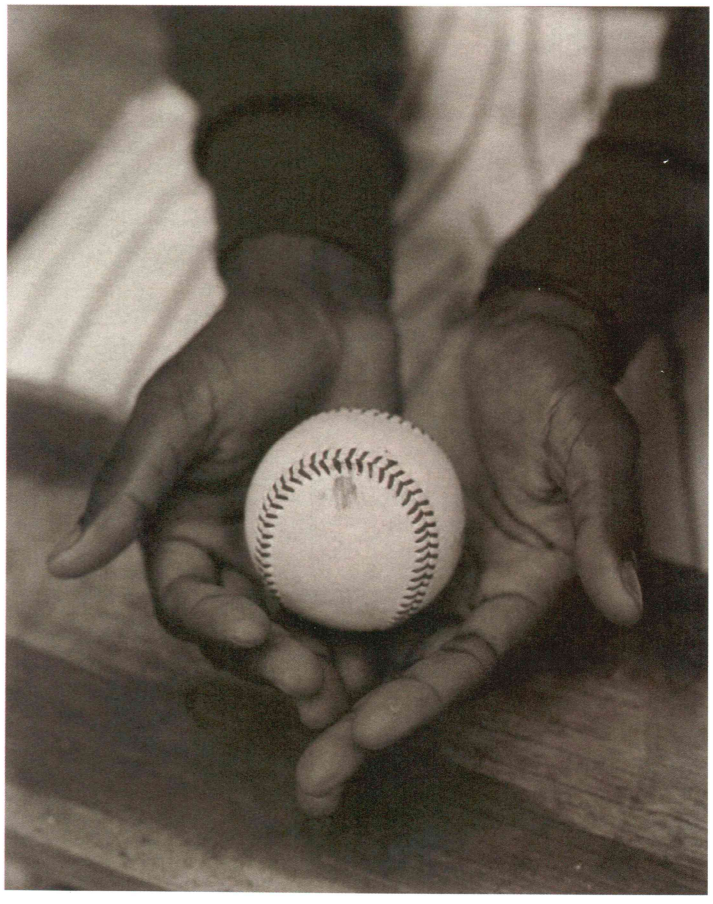


Photo credits page 22-23 (top row left to right, bottom row left to right):

1. Carrie Mae Weems, *Untitled*, 1990, Gelatin silver print on ceramic plate, 16 cm, Center for Creative Photography, University of Arizona: Purchase ©Carrie Mae Weems
2. Carrie Mae Weems, *Untitled*, 1990, Gelatin silver print on ceramic plate, 16 cm. Center for Creative Photography, University of Arizona: Purchase ©Carrie Mae Weems
3. Jo Ann Callis, *Man with Tie*, 1977, Dye imbibition print, Center for Creative Photography, University of Arizona: Purchase ©Jo Ann Callis
4. Ozier Muhammad, *BLOWN HEADLINES:* High winds blow loose newspaper pages around 125th street in Harlem near the IRT Subway entrance as some people make their way to work that morning, 2006, Inkjet print, 35.6 x 52.7 cm. Center for Creative Photography, University of Arizona, ©Ozier Muhammad/ NYT
5. Dean Brown, *Glacier Bay, Alaska,* 1971, Dye imbibition print, 10.5 x 16 cm. ©Center for Creative Photography, Arizona Board of Regents
6. Barbara Bosworth, *Christmas solar eclipse in my father's hands, Sanibel,* 2000, Gelatin silver print, 57.9 x 46.4 cm. Center for Creative Photography, University of Arizona: Gift of the artist ©Barbara Bosworth
7. Harold Jones, *Self Portrait with Water, 1978-1979,* printed 1982, Gelatin silver print, 45.4 x 36 cm. Center for Creative Photography, University of Arizona: Gift of Michael Stern© 1978 Harold Jones
8. Lola Álvarez Bravo, *Sunglasses and case.* Center for Creative Photography, The University of Arizona, Tucson, AZ
9. Kozo Miyoshi, *untitled [portrait of Sally Stein],* 1992, Gelatin silver print, 45.3 x 35.3 cm. Center for Creative Photography, University of Arizona, ©Kozo Miyoshi
10. Deborah Willis, *Daddy's Ties II, 1992,* Mixed media with photographic prints, 74 x 91.5 cm. Center for Creative Photography, University of Arizona: Purchase ©Deborah Willis
11. Stephen Marc, *untitled from the series American/True Colors,* 2017, Inkjet print, 30.5 x 45.7 cm. Center for Creative Photography, University of Arizona: Purchase ©Stephen Marc
12. Ansel Adams, *Frozen Lake and Cliff s,* 1932 Center for Creative Photography, University of Arizona: Ansel Adams Archive ©The Ansel Adams Publishing Rights Trust

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1. Andrea Modica, *Oneonta Yankee,* 1993, Platinum/ Palladium print, 24 x 19.5 cm. Center for Creative Photography, University of Arizona: Purchase ©Andrea Modica
2. Bremner Benedict, *Alewife,* 2003, printed 2011, Inkjet print, 76 x 76.1 cm. Center for Creative Photography, University of Arizona: purchase with funds provided by Haluk Soykan ©Bremner Benedict
3. Lucy Capehart, *Sarah Natani, Renowned Navajo Weaver, Holding Newborn Lamb, Table Mesa, near Shiprock, New Mexico,* 1999. Dye coupler print; Chromogenic print. Center for Creative Photography, University of Arizona: Indivisible Archive ©Lucy Capehart
4. Ansel Adams, *Moonrise, Hernandez, New Mexico,* 1941. Gelatin silver print. Center for Creative Photography, University of Arizona: Ansel Adams Archive ©The Ansel Adams Publishing Rights Trust
5. Nancy Floyd, *Evolution of the Typewriter* 1983-2013, 2015. Inkjet print. Center for Creative Photography, University of Arizona: Gift of the artist ©Nancy Floyd

POWERING CANCER PROGRESS

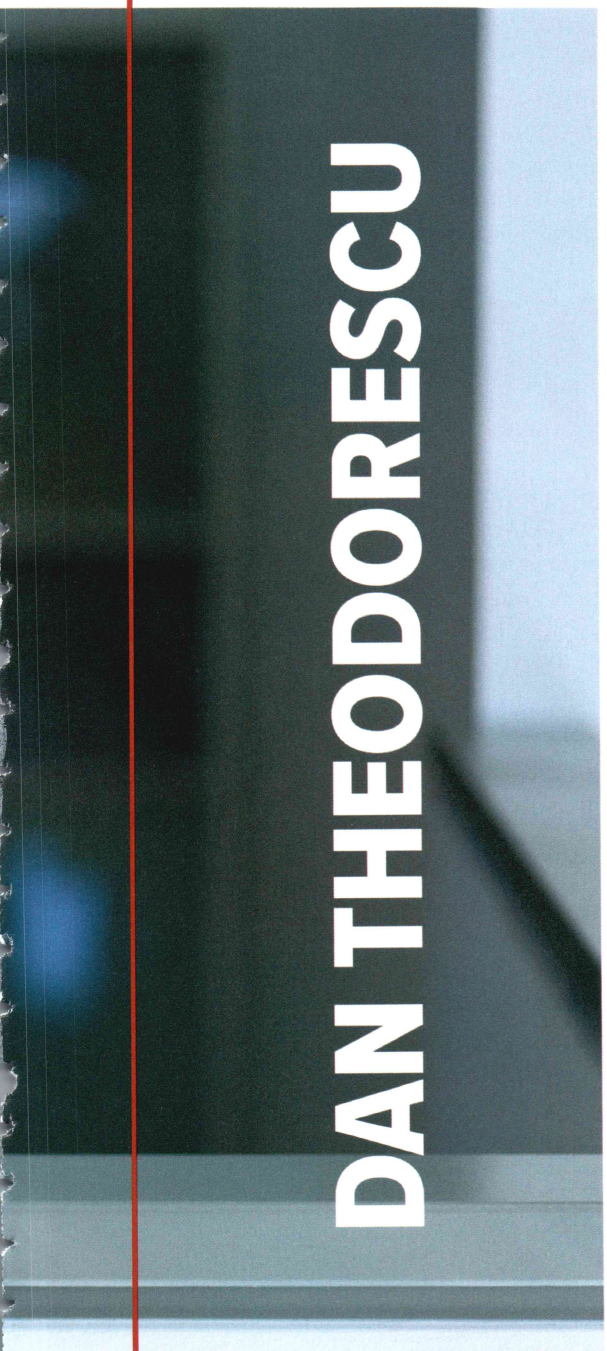
U of A faculty advance research in prevention, detection and treatment of cancer.

Photo: **Joshua Elz**

Story by **Jesse Klein**

Cancer is among the leading causes of death worldwide, claiming nearly 10 million lives each year, so it's clear why it is a focus for scientists and researchers. But cancer also interests scientists because it is caused by the body's own systems going haywire. Researching cancer is therefore a powerful tool both for understanding the human body and for creating real impact for millions of patients and families.

At the University of Arizona, researchers are diving deep into all types of cancer research. The university's National Cancer Institute-designated Comprehensive Cancer Center, founded nearly 50 years ago, houses hundreds of doctors and researchers and has more than 70 labs participating in over 200 clinical trials. And there is even more cancer research happening at other campus institutions, like the Center for Advanced Molecular and Immunological Therapies (CAMI). Arizona researchers are making important discoveries that can help doctors be more targeted in their approach to treating cancers that affect specific groups of people. They're also developing new technologies for diagnosing and preventing cancer.



WHAT A CANCER TELLS US ABOUT MEN

Dan Theodorescu, M.D., Ph.D., the Nancy C. and Craig M. Berge endowed chair for the director of the Cancer Center and a professor in the College of Medicine – Tucson, has been studying bladder cancer for decades. He has developed therapeutic techniques, discovered the genes that predict bladder cancer and developed a personalized treatment called the Molecular Twin, an artificial intelligence-based precision oncology platform.

His recent study takes a new look at a well-known phenomenon that could expand our knowledge not just about cancer but about male aging in general.

"I'm pursuing a major discovery we reported two years ago, which showed for the first time that the Y chromosome is very important not only in cancer biology but also for therapeutics," Theodorescu says.

The Y chromosome is significantly smaller than the X chromosome and does not encode nearly as many genes as X does. But now, Theodorescu's cancer research is shedding new light on the importance of this chromosome.

"Loss of Y" is a condition where a man's cells lose the Y chromosome. According to Theodorescu, it's been known for a while that loss of the Y chromosome in certain tumor cells makes a person more likely to die of cancer. The mechanisms behind why this occurs were unknown prior to Theodorescu's findings in 2023 and 2025, which were both published in Nature.

"It turns out that the cancer that has lost the Y chromosome is more aggressive, because the immune cells that try to attack it become more exhausted and are having trouble controlling the cancer," he says. "But there's a silver lining."

Cancer tumors with loss of Y are more sensitive to a common cancer immunotherapy treatment called immune checkpoint inhibitors. These inhibitors reverse the exhaustion of the immune cells and allow the body's immune system to fight the cancer.

Theodorescu's new study found that the loss of Y in immune cells in the blood makes the immune system less effective at infiltrating the cancer.

A new treatment that has gained traction with cancer patients over the past few years that could be impacted by Theodorescu's findings is called CAR T-cell therapy. This is a personalized cancer treatment in which a patient's own T cells are modified in a lab to be better at fighting the cancer.

CANCER RESEARCH

Theodorescu discovered that if the cells modified by the lab are missing Y chromosomes, they are much less effective at fighting the cancer.

"The immediate implication is that people should be really mindful of what cells are used to generate CAR T cells," he says. "Because you don't want to have a CAR T product out of Y-negative cells."

Theodorescu is actively developing new therapies aimed at destroying cells that have lost the Y chromosome and also is looking into what causes loss of Y as men age.

GOING TINY TO STOP OVARIAN CANCER

Interim Vice Provost for Health Programs and Professor of Biomedical Engineering Jennifer Barton, Ph.D., has created the world's smallest endoscope that can image and collect cells. The equipment, less than one millimeter wide, is small enough to fit into a woman's fallopian tubes and travel to the ovaries to look for ovarian cancer.

"Still today, there is no early detection method for ovarian cancer," Barton says. "Symptoms are vague and usually aren't diagnosed until the cancer is late stage."

Because of this, many women with a family history of ovarian cancer have the ovaries and fallopian tubes removed at around age 35. Barton's endoscope could help by identifying patients with abnormal cells early, eliminating the need for surgery on patients who don't have abnormal cells.

Beyond the obvious challenge of making an endoscope smaller than the width of a credit card, the fallopian tubes also offer unique challenges.

"The tubes are very stretchy, and they're not straight," she says. "They can twist around and can change diameter. The fallopian tubes are also filled with all these finger-like projections that make getting through the fallopian tube more difficult than other small tubes of the body."

Barton focused on overcoming the mechanical challenges, while waiting for laser fiber bundles to become small yet powerful enough for medical use, which took about 20 years.

Her endoscope is currently being used in two clinical trials, one in healthy patients to see how the endoscope works in the body and the other in fallopian tubes that have been removed from patients with ovarian cancer to confirm that they can visualize and collect the cancer cells.

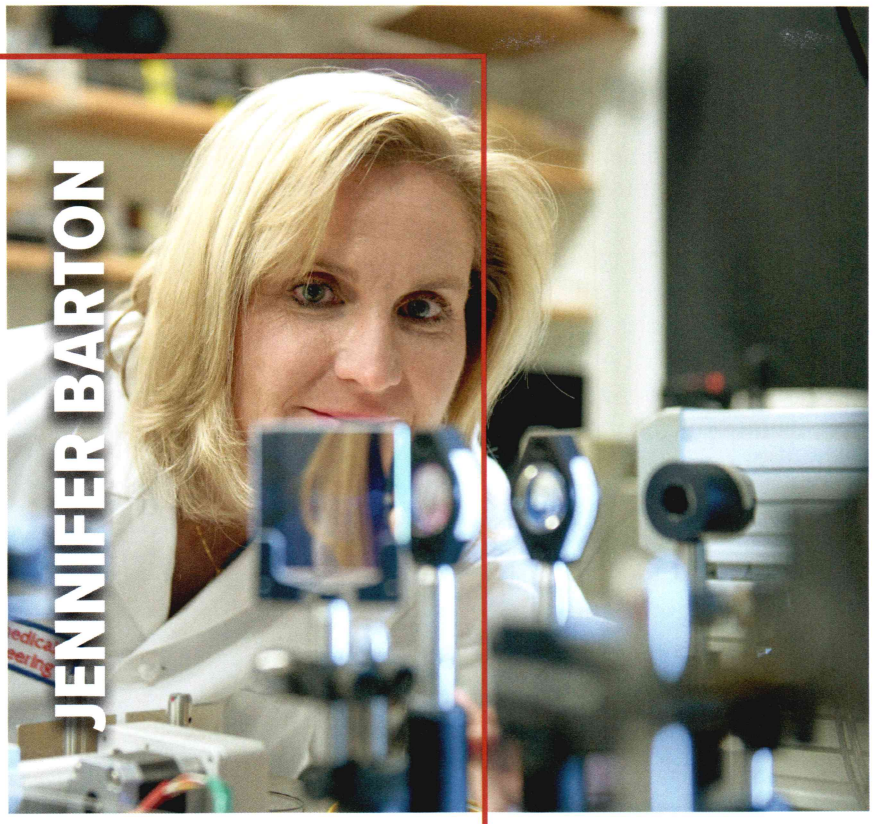
She is working with Tech Launch Arizona to help find a manufacturer who can commercialize the equipment to get it in the hands of doctors within five years.

"The next step really will be to find a company that's capable of producing this in quantity," she says. "That's just not something a university can do. I've got my graduate students down in the basement making them by hand."

A VACCINE FOR CANCER

When most people hear mRNA, they immediately think of the COVID-19 vaccine. But mRNA has become one of the most powerful tools in a researcher's tool belt. Tanvir Ahmed, Ph.D., for example, is using mRNA to create medicine that

Photos: **Kris Hanning**



JENNIFER BARTON

TANVIR AHMED

is personalized to a patient's specific cancer. His work at CAMI is creating a vaccine that trains the body's immune system to target and destroy tumors.

"We are trying some unique technologies and platforms to figure out how we can successfully and effectively kill these tumor cells," Ahmed says.

Ahmed explains that one of the reasons tumors grow uncontrollably is because they evade the immune system with a mutation. Traditional cancer treatments attack cancer cells, but they also attack healthy cells – they just deteriorate cancer cells faster because of their unregulated growth.

His mRNA cancer vaccine starts by collecting both healthy and cancerous cells from the patient and integrating the mutations from the cancer cells into the immune cells so the immune cells can then detect, target and destroy the cancer cells. It takes a few months to manufacture the personalized vaccine.

His team is focusing on melanoma because it is a very high intensity cancer, but he hopes to later develop vaccines for breast, prostate and colon cancer.

"If we develop this technology, it can target anything," he says. He hopes to be in the first phase of clinical trials in three years.

Photo: **Quion Lowe**

A CANCER SCREENING WITHOUT THE DOCTOR'S OFFICE

Rogelio Robles-Morales, M.D., is a gynecologic oncology surgeon turned researcher. At the doctoral program in clinical translational sciences at the U of A School of Health Professions, he found a way to help cancer patients outside of the doctor's office and far from the operating room.

He wanted to increase cervical cancer screenings and vaccinations in a community he is close to after growing up in Nogales, Mexico — Hispanic women.

According to Purnima Madhivanan, Ph.D., associate professor of health promotion sciences at the U of A's Mel and Enid Zuckerman College of Public Health and a Cancer Center member, people from many cultures are not comfortable with pelvic examinations. Avoiding these invasive examinations keeps some people from identifying cervical cancer early and getting the health care they need.

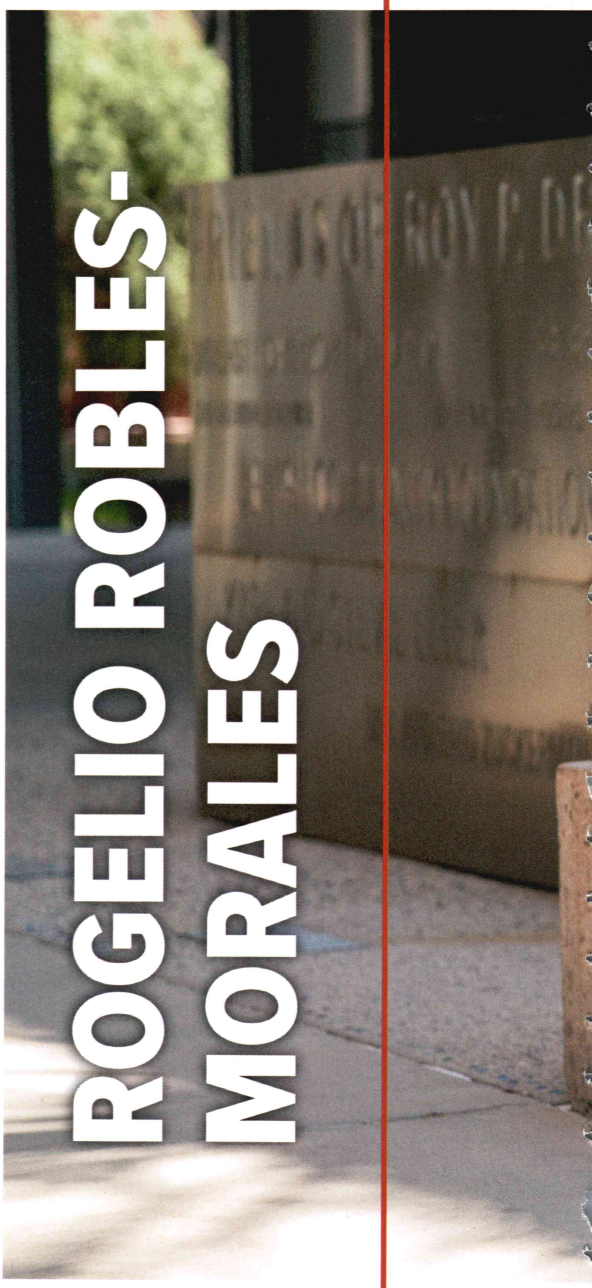
"Only about 5% to 10% of women are at high risk for cervical cancer," Robles-Morales says. "But you make all of them go through an invasive procedure that requires a clinical setting that has a high mental burden, instead of just bringing those who are positive on a screening."

Robles-Morales wanted to create a cervical cancer screening that was less invasive, more comfortable and more likely to be usable for underserved communities.

He is testing three less-invasive field kits for collecting samples for cervical cancer testing: a vaginal self-sampling kit called the Simpli-Kit, a noninvasive urine collection and preservation kit called the Colli-Pee, and the Tasso, a self-collected blood sample kit.

His team collects and delivers samples from participants, then conducts in-depth interviews to determine which method was preferred, whether samples were collected correctly and which method participants were most willing to use. They also look at whether the kits yielded accurate results.

"I look for strategies that were high on recruitment," he says. "Which one would the community gladly use, because we still have a problem with uptake." ❖



We are grateful to the many Cancer Center donors whose generosity advances research in cancer prevention, detection, and treatment. Follow the QR code to learn more about exciting work at the Ginny L. Clements Breast Cancer Research Institute and to make a gift to support it.

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SAN DIEGO

HELPING CLOSE TO HOME

STORY BY MIKE POWELL | PHOTOS: DANIELLE LACHENAUER

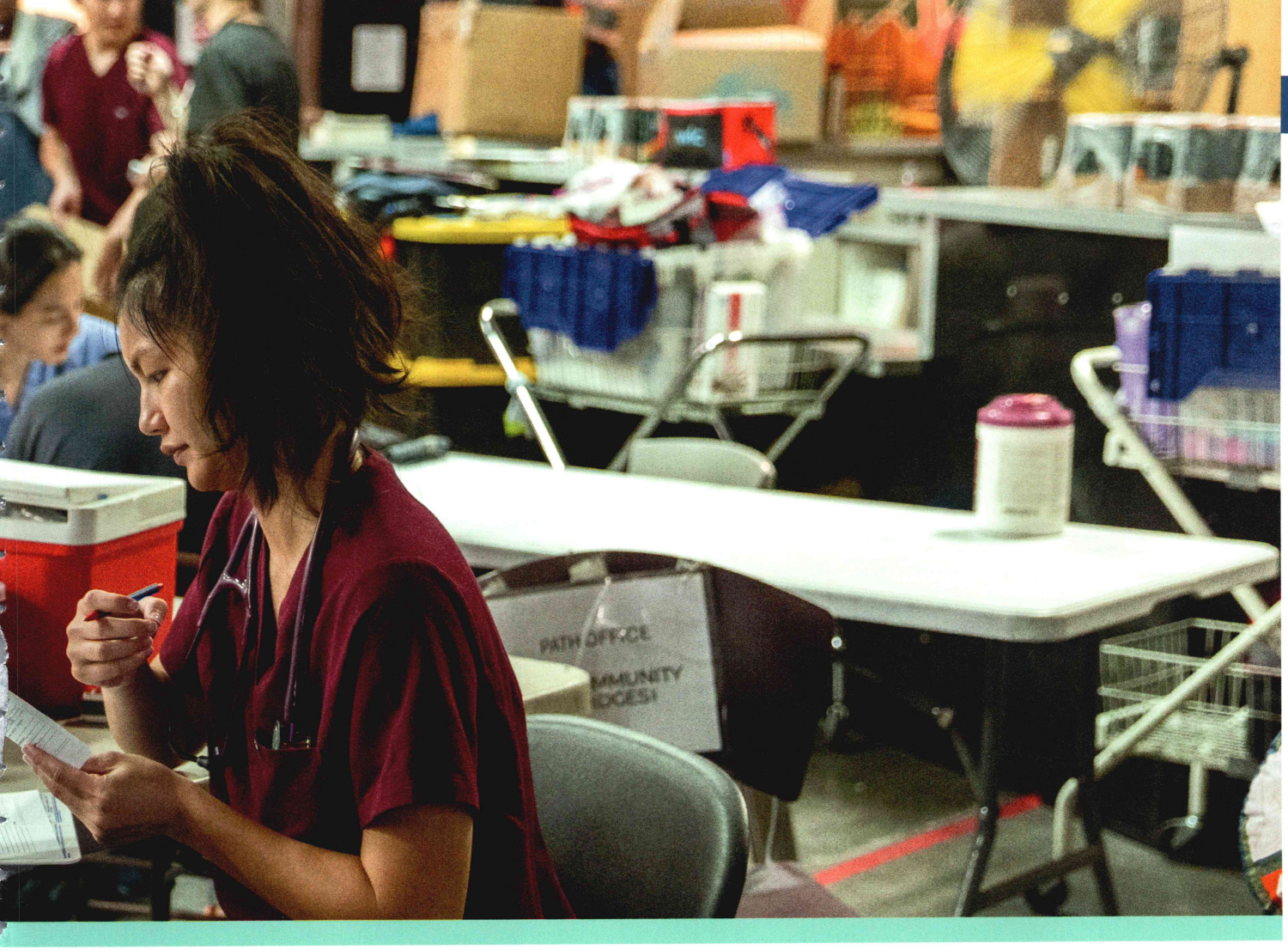
Student volunteers in the Street Medicine Phoenix program are bringing basic medical care to the homeless.

Phillip is having a tough day: His knee brace got stolen again. There's a bone in his knee that pops out to the side when he walks, and it hurts to straighten the leg back out. That's the thing about the brace: It keeps the bone in.

Jessica Guido, a third-year student at the University of Arizona College of Medicine – Phoenix (COM – P) and one of the many tireless volunteers who keep the Street Medicine Phoenix program running, kneels next to him and starts going over some basics: How long has it hurt? ("Since '91.") Do you have any ongoing health issues? ("Healthy as a horse.") Do you want any Tylenol or ibuprofen? ("I'd rather feel the pain, so I know how not to move it.")

As they talk, Guido's eyes drift up from Phillip's knee to his shoulder. "Oh," she says, startled. "Your shoulder's popping out." Yeah, he says. He took a header over his bike handlebars last year and messed up his collarbone. He was supposed to get surgery on it, but he doesn't want to risk it getting infected while he's on the street and is worried a sling will bother him in the heat. Really, what he could use right now is a cough drop. "Do you have a sore throat?" Guido asks. "No, a toothache." Where? "Anywhere there's a broken tooth," he says, opening his mouth.

Like a lot of patients who stop by SMP's station that morning, Phillip has a story of cascading, interrelated circumstances: Not



just the knee, but the collarbone; not just the collarbone, but the teeth; not just the truck that broke down or the job he couldn't get to or the housing he eventually couldn't afford, but the whole undifferentiated mass. It happened gradually, he says. But now that he's in it, it feels like the only way out is all at once.

A volunteer comes back with not one but two knee braces. "Your shoulder," she whispers, covering her mouth.

We are in the lobby of the Lodestar Day Resource Center, a cinderblock building in downtown Phoenix that serves as a hub for a variety of homeless services including mental health counseling (through Community Bridges), employment support (through St. Joseph the Worker), ID and Social Security assistance (through the Homeless ID Project), religious services and so on. There's a bathroom where people are washing up and a row of outlets along a wall where people are charging motorized wheelchairs. In the corner is a vending machine stocked with naloxone, a nasal spray that has proved miraculously successful in counteracting the effects of opioid overdose. A TV on the wall plays "Sanford and Son" on mute. There's a feeling in the room of waiting, but also of having nowhere in particular to go.

SMP has been setting up here roughly once a month for the past four years. Tomorrow, they'll provide similar services at a nearby church. Over the course of two days, I witness everything from wound care (a man named Dave's leg is weeping from his knee down to his ankle) to conversations about cholesterol and processed food. Some people just show up for the electrolyte solution and a clean pair of socks. "We might be the only provider these patients are seeing for the next six months," Guido says. "It's all about organizing things into what the patient wants addressed most."

For clinicians accustomed to being in positions of authority, the experience can be a fundamental shift.

"Not patient-centered care," as Brett Feldman of the Keck School of Medicine at the University of Southern California described it in a 2020 TEDx Talk, "but patient-*led* care."

Prior to the arrangement in the Lodestar lobby, Street Medicine Phoenix would do what its name implies: Go directly into the street and offer help. It wasn't as simple as it sounds. Many of the patients SMP was dealing with didn't want help, or had been burned by experiences with doctors in the past, or operated with a general mistrust of almost anyone in a position of institutional authority, whether city officials, police, doctors or otherwise. (When asked how long it had been between his last doctor's visit and his first check-in with SMP, one patient cut me off and said, "I don't go to doctors.")

"We're trying to re-establish communication between people experiencing homelessness and medical care they are fed up with, so that they might be receptive," says Robert Fauer, a former family physician who spent 40 years running a private practice in Phoenix and Scottsdale before volunteering with SMP in 2021 and eventually becoming the program's medical director. "A lot of them are angry."

It's a messy process, but it seemed to work. Fauer remembers trying to disseminate COVID-19 vaccines to people in homeless camps at the height of the coronavirus pandemic. "Maricopa County had set up a tent," he says. "After an hour, we gave out four vaccines." They decided to go out and start tapping on tents individually, starting conversations, cultivating a little trust. By the end of the next hour, they'd given out all their vaccines. "It's like they weren't going to come to us," he says, "but we could go to them."

The city's largest homeless encampment — one of the largest in the country, in fact — was a roughly 15-block section of downtown known as the Zone. In the general freefall of the COVID-19 moment, the area's violence, property damage and open drug use felt like an expression of America's biggest problems in their rawest forms: the housing crisis, the opioid crisis, the ever-proliferating numbers of people on the street.

"A thousand people, like you would expect to see in Southeast Asia or Africa or the Middle East," Fauer says. Catherine Miller '22, SMP's outgoing lead, says that as a kid she dreamed of joining the Peace Corps to work with refugees. "I ended up seeing a refugee camp in my backyard," she says.

In 2022, local business owners filed a lawsuit against the city of Phoenix on the grounds that conditions in the Zone constituted a humanitarian crisis. They won. The effect was to precipitate a massive, block-by-block clearing of the area, forcing people like Phillip to squeeze onto the already overcrowded waitlists for temporary housing or figure it out on the fly. More recently, the city banned urban camping. Now Phillip gets arrested for sleeping outside and comes back to find his campsite trashed.

("It just gets harder and harder to establish yourself," he says. "What kind of life are we supposed to have?")

"For now, we've shifted from street medicine to something more like mobile health," Fauer says. "Instead of being on the street, we go to the church, we go to the S.O.S.," or Safe Outdoor Space, a new, small, gated campsite managed by the city. Whatever street outreach they do — a Friday-night event aimed at people with substance use disorders held in a nearby parking lot, for example — is done on private property with consent of the property owners. "I keep letters of permission from the owners in case the police show up," he says — his papers, as it were. "The city was sued," he says, shrugging. "The suit says they can't allow camping. They have to shelter those people. It wasn't just to be punitive." The program adapts.

The history of modern street medicine starts with James O'Connell, a Harvard professor who started going on night rides in the mid-1980s with a group called the Boston Health Care of the Homeless Program in an effort to offer medical outreach to the homeless, who were dying on the street in startling numbers. "Rough sleepers," the BHCHP called them; the term later became the title of a bestselling book.

In the early 1990s, a doctor named Jim Withers at the University of Pittsburgh's UPMC Mercy hospital started similar outreach efforts after overhearing two colleagues refer to a man who'd frozen to death on the street as a "bumsicle." "That man haunted me," Withers said in a 2015 TEDx Talk. "Our hospital was supposed to be a place of healing, but he'd chosen to face death rather than to accept our care, and instead of asking ourselves why, we dehumanized him."

After some social conditioning ("Don't dress like a doctor and don't act like an asshole," one patient advised him), Withers managed to make inroads to a population the health care system had conventionally ignored, if not outright avoided, eventually founding the Street Medicine Institute in 2009. "House calls to the homeless," he called it.

Street Medicine Phoenix was founded in 2017 by then-students Jeffery Hanna '17 and Justin Zeien '17 '21 and established within the U of A's Mel and Enid Zuckerman College of Public Health. The concept was similar to Boston's and Pittsburgh's: Bring basic medical care to people who need it most. "As I was applying to medical school, I was constantly thinking about what sort of programs I could implement to serve underserved populations — to really address the health inequities that exist in those populations," Zeien said in a 2021 interview. "Our ultimate goal is really just to meet people where they're at. And, in a humanistic, dignified way, really restore them to where they want to be in life."

But the program also is an opportunity to bridge the gap between public health and medicine in a way that amplifies the impact of both. "Medicine isn't just a treatment, it's advocacy in the community," Guido says.

The group also has an optometry team to provide vision screenings and glasses.

"I think we could probably do a better job as standard physicians in making sure we're clinically addressing [medical needs] but also understanding the setting and type of population you're treating."

"I can't tell you how many patients I've seen on street runs walking around with humungous infected wounds on their legs, and they come up to ask for a Gatorade," says Miller. "There's 30 people in scrubs standing around with stethoscopes around their neck. [Health] is not the first thing [the homeless] think of by any means." One patient on Sunday morning — Patrick, former smoker, high-blood pressure, diabetes — jokes with his student provider that her medical insights are great but that she needs to work on her chitchatting. (He uses a less delicate term for it that starts with "bull.") "You never have to worry about talking to homeless people," he says. Some days talking is what he needs most.

"When someone tells you to look for a red car, you find red cars," says Miller. "When you look for medical conditions, you see them everywhere. It's almost like this deep prioritization of long-term issues compared to, 'what do I need right now?'" Patrick says SMP saved his life.

"When I started out, we had one little wagon," Fauer says. "By the time I took over as medical director, I'd purchased a car." Then came a van. Two years later, a trailer. The program now coordinates volunteers from three universities — the U of A, ASU and Creighton University, in Omaha — and the Mayo Clinic on a shoestring budget and a patchwork of small grants. With the exception of a rotating group of supervising physicians and a few support staff, it is entirely student run.

"I grew up in Phoenix," Guido says. "I went to undergrad [at ASU]. I've seen how underserved our unhoused population is." She joined SMP as soon as she started at COM – P in pursuit of what she describes as the program's "radical accessibility." "I thought it was just really inspiring to see such a big group of people who are so dedicated to going out and meeting the patients where they were, literally and figuratively."

Andy Gontko, one of the program's co-leads, says SMP was one of the reasons he applied to COM – P in the first place. He'd grown up in the Chicago area, volunteering at a homeless shelter as a teenager before moving to New Orleans to study chemical engineering at Tulane. "I love to walk, love to bike," he says. "I met a lot of people who were unhoused, and just talking with them — that's something I knew I wanted to get more involved with."

Gontko says he probably could've made a bigger impact on more lives had he taken his engineering degree into pharmaceutical development, but he couldn't shake the prospect of getting to meet people face to face, "to at least feel like you're making a difference and *seeing* those cases, *meeting* those people that you're actually making the difference for." Then he says something remarkable for someone spending so much of his free time volunteering with the homeless: "In that sense, I made the selfish choice."

Fauer's own conversion moment came in the wake of the subprime mortgage crisis in the late 2000s. "A million people lost their homes," he says. First, he gave out money ("It was a little demeaning," he says). Then he gave out supplies: snacks, socks, blankets in the winter, water in the summer. "After about eight years, I thought, man, I can't figure out how to utilize my resources as a physician. I'm giving them things, and I'm being nice, but I'm not figuring this thing out." By the time he connected with SMP in early 2021, the issue had seemed to explode.

"[Street medicine] is growing," he says. "Not just because of our program, but because homelessness is becoming a bigger issue, and people are realizing, especially in medical

schools, that we're not meeting the needs of the people experiencing homelessness." Last year, he got grant funding for umbrellas to provide some relief from the heat. They wiped out the distributors. "You can't find a store with 2,000 umbrellas."

According to a metric called the Point-in-Time Count, conducted by the U.S. Department of Housing and Urban Development, the number of Americans who experienced a night without a safe or stable place to sleep increased more than 35% between 2019 and 2024; in Maricopa County, it increased nearly 50%.

Some of those people are considered "sheltered," whether in emergency shelters or transitional housing; the rest are on the street. The unsheltered population is growing faster. Most of the sheltered will be "positively exiting" the system within a year, but plenty will slide into what is called "chronic homelessness." Meanwhile, the homeless account for about half of the heat-related deaths in Maricopa County; that number has risen dramatically in the past decade, too.

For Fauer, the question is how to allocate the few resources they have in ways that make the biggest impact, not just on the homeless but on the health care system that stands to bear their burden. "The person who's going to use the most health care dollars is [already] identifying themselves by being in the hospital," Fauer says. "And the person who is most likely to be in the hospital next experiencing homelessness is the person who's just been discharged. Because they don't get their follow-up, they can't get their medicines, or their medicines have been stolen, or they can't get their medical supplies, or they can't make it to a follow-up appointment. Whatever it is, they're going to get sick again." If you could put your resources into that one person, "that's worth tens of thousands of dollars," Fauer says. "But we're light years from that."

"What's mind-boggling is that 80% to 90% of people experiencing homelessness are insured," says Miller. "Very few other vulnerable populations have such robust insured numbers. I had a patient who has this humongous skin lesion that goes all around his nose and into the start of his eyes. It's very dark black. It's clearly a late-stage skin cancer. Realistically, he needs plastic surgery for that, or maybe some radiation, but a whole thing, because their eye orbit is there. He would need to go to a primary care doc, who would need to refer him, because with AHCCCS [the Arizona Health Care Cost Containment System, Arizona's Medicaid], you can't just walk into a specialist, you need to get a referral from your PCP. Even then, there are only, like, three or four dermatologists in the Valley that accept AHCCCS."

"I think of [SMP] as a learning opportunity," she says. "We bribe [students] with the idea that you *will* see your clinical failures. You *will* see what you didn't think of, and why people stop managing their diabetes, and all the social needs you don't take into account at this extreme level of homelessness."

"The part of it I never thought of doing was teaching," Fauer says. "Teaching the next generation of students so they understand that when someone experiencing homelessness sees them, they don't treat them like a textbook. They've got think outside the book to make their medical decisions work for this person. So that's a value, right?"

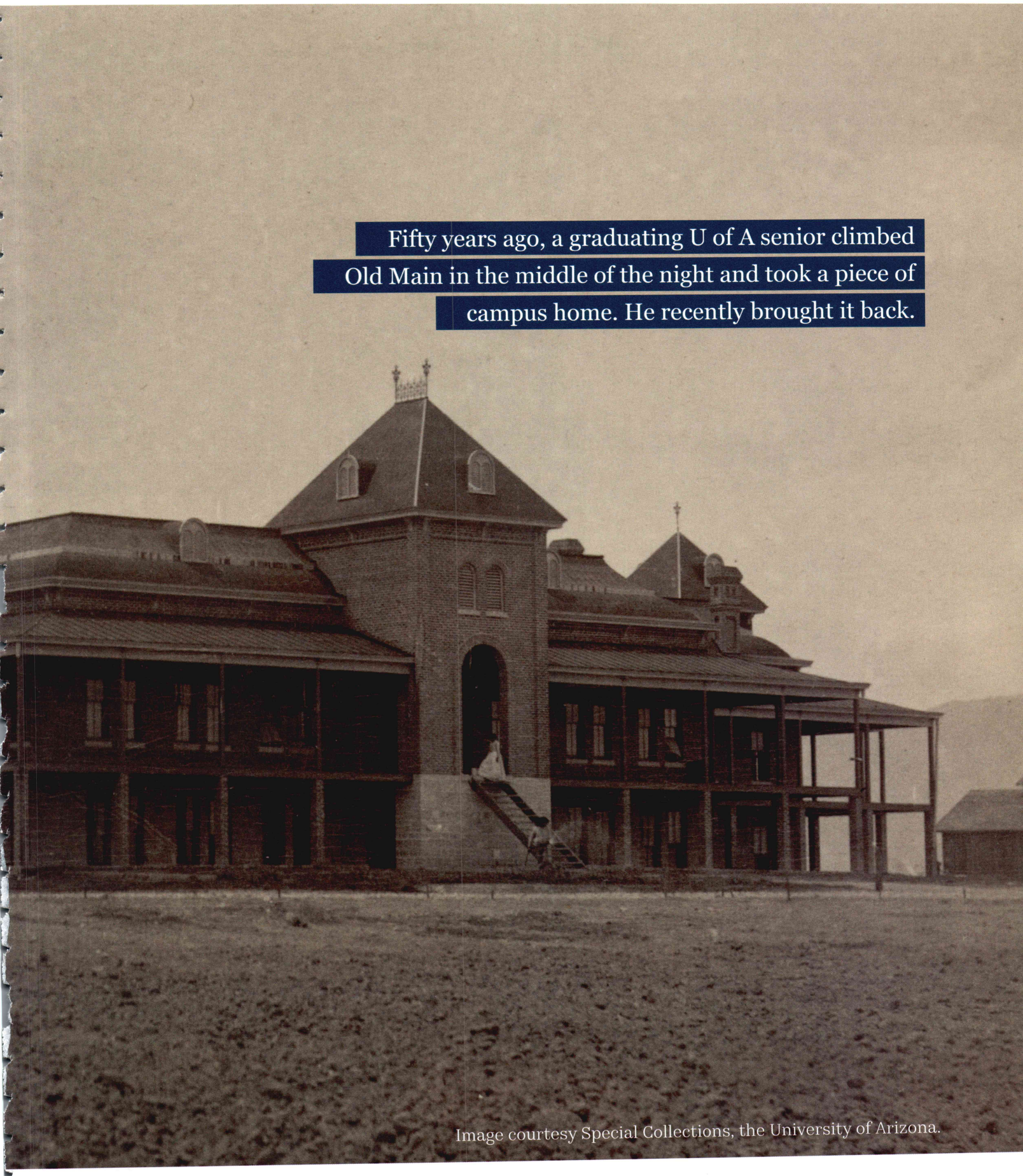
"I tell people my job, and almost immediately — and I cannot even remember a single instance where this did not happen — they respond with something like 'thank you' or 'that sounds like hard work,' and follow it up with their own example of someone that they have seen who's homeless," says Miller.

Sometimes the conversation is sympathetic, sometimes frustrated ("... all the people camping at the end of my street ..."), but it always becomes personal. "It's this underlying problem that everyone knows about," Miller says. "But people have no idea what happens behind the scenes. They have no idea that this infrastructure exists. They see someone on the side of the highway with a sign, but they don't see this whole *industry* of people. It's hard to wrap your mind around."

It can be slow going. "It's almost like my coping mechanism to talk about data and statistics, because it can be so empathetically hard," Miller says. But beyond the challenge is the small persistent light of purpose. The day I visit Lodestar, the temperature in Phoenix hits 110 for the first time in 2025. The next day, it hits 114. I think of a flyer I saw taped to the inside of the SMP van's doors, saved from a distribution event for the St. Mary's Food Center. "LOCATION," it says. "HERE. DATES: TODAY. TIMES: NOW." ❖

STORY BY **MIKE POWELL**

CAMPUS KEEPSAKE



Fifty years ago, a graduating U of A senior climbed Old Main in the middle of the night and took a piece of campus home. He recently brought it back.

Image courtesy Special Collections, the University of Arizona.

Richard had something to get off his chest — or out of his attic, as it were. "I can't remember whose office I called first," he says. "But a young lady answered the phone. I told her who I was, what class I graduated from. I told her, 'I have something I want to return to the university, but I don't know who to give it to.'"

"What is it?" the woman asked.

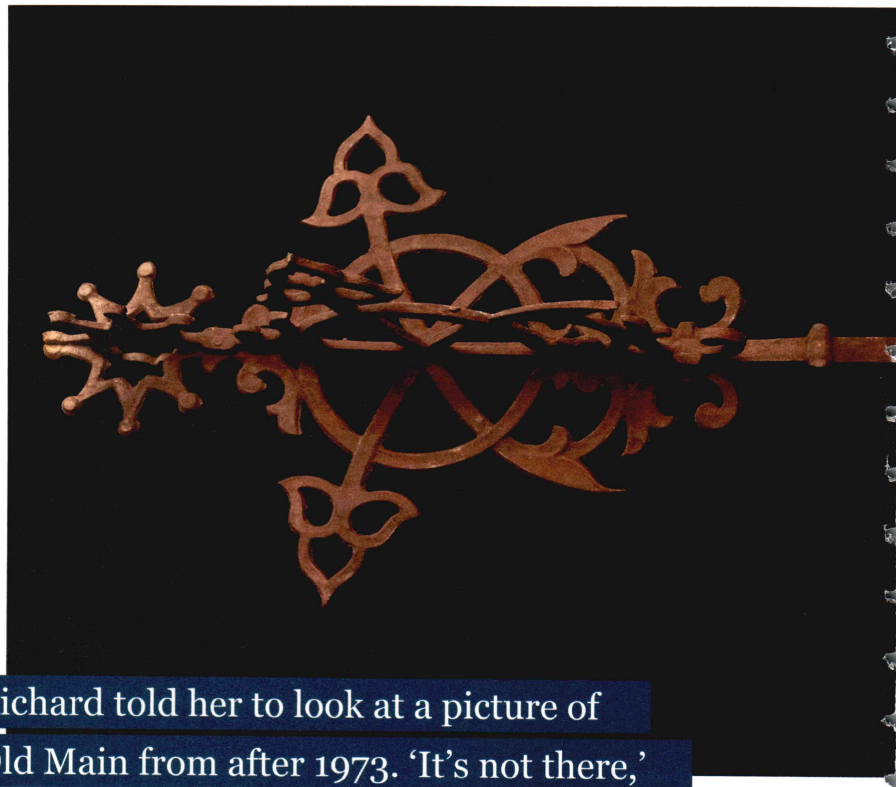
If you look up pictures of Old Main prior to 1972, he told her, you'll notice a decorative metal spire on the south tower — a finial, they call it.

The woman clicked around for a minute.

There it was: a metal spire about two feet tall, with some ornamental looping near the top. Then Richard told her to look at a picture of Old Main from after 1973.

"It's not there," the woman said.

"That's because I have it," he said.



Richard told her to look at a picture of Old Main from after 1973. 'It's not there,' the woman said. 'That's because I have it,' he said.

It's 1973. Richard has been walking past Old Main for years now, looking at that little spire. "I called it a lightning rod," he says. One Sunday he was out throwing a Frisbee by the Old Main fountain with some friends. "You know, before I leave here, I'm going to steal that thing," he told them. What thing? they asked. Richard pointed to the roof.

"I worked as a phone operator in the dorms," he says, "so I volunteered to hang around after commencement and help clean out the rooms and get things ready for summer." One night he put on some dark clothing, threw a few tools in his army surplus backpack and walked over to Old Main. There was a big mesquite on the east side. Richard started to climb.

One of the branches curved up over the lower roofline covering the sidewalk. Richard made it from the branch to the roof, then walked over to the roof of the south tower and straddled a vent, putting him just about at eye level with the finial. He was able to loosen two of the bolts using his tools, but didn't want to risk shimmying around to the other side of the vent to get the third and fourth. The wood the finial was bolted to was rotted enough that he was able to jerk the finial loose with his hands.

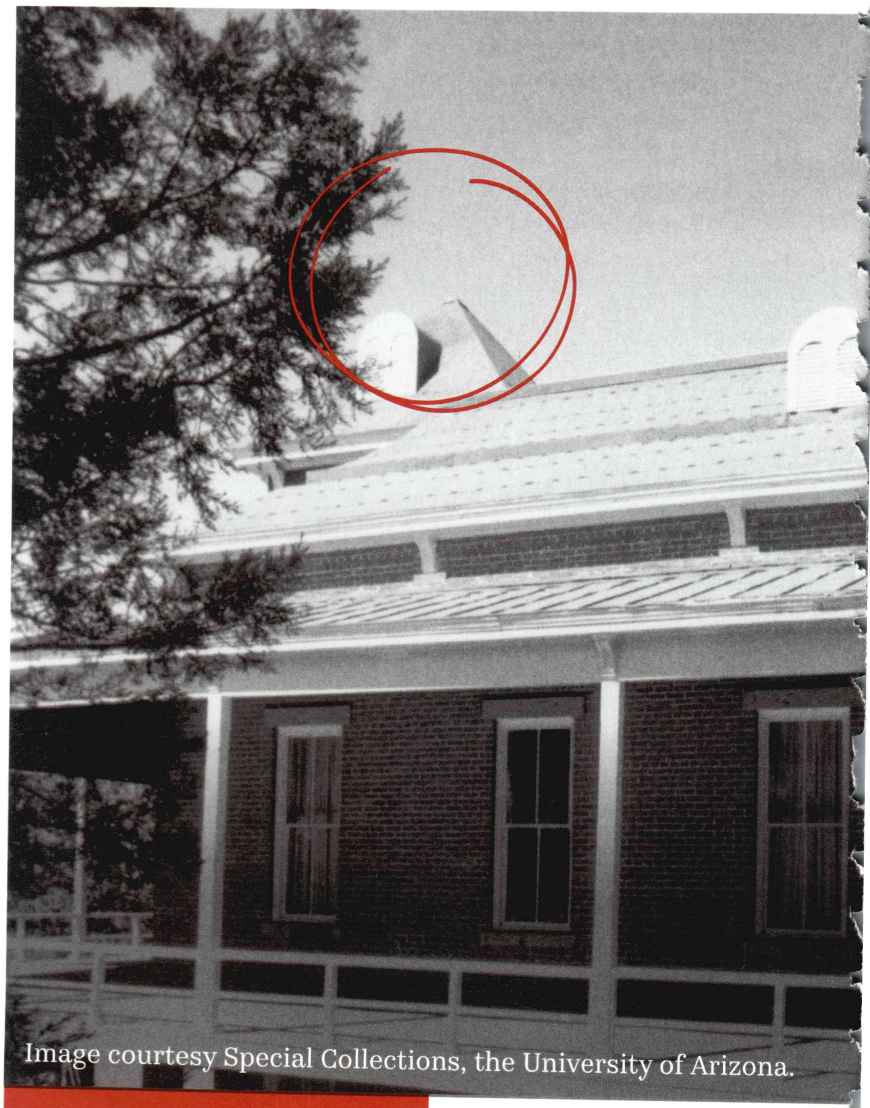
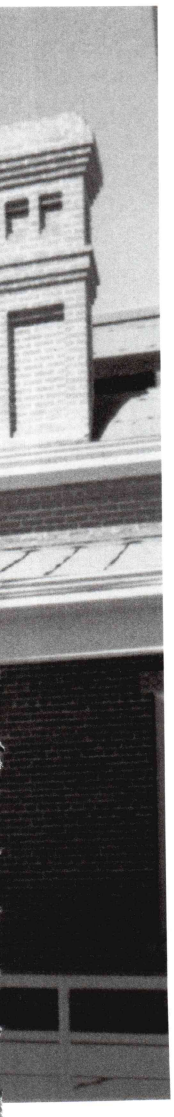


Image courtesy Special Collections, the University of Arizona.

PHOTO: **CHRIS RICHARDS**



A set of headlights came around the bend. Richard pressed himself against the vent until they passed. Finial in hand, he walked back across the roof to the mesquite. Two students were sitting on a bench down below. They looked up. Richard pressed his finger to his lips. "The 'be-quiet' symbol," he says. Then he dropped the finial from the mesquite branch into a bed of roses along the wall. It stuck in the ground.

A night watchman came out from under the Old Main stairs, pulled out a pack of cigarettes and started chatting with the students on the bench. A whole cigarette's worth of conversation, with Richard up there in the tree. Eventually, the watchman left, and Richard shimmied down.

"You didn't see me," he told the kids on the bench. "I was not here."

Richard got back to his dorm room and woke his roommate up. His roommate stared at him in disbelief, this ambassador from another world, a dream perhaps.

"I got it," Richard said.

"You got what?"

Richard turned on the lights. "Oh my God," his roommate said. Then he went back to sleep. Richard rolled the finial up in a quilt and left campus the next day.

Fifty years passed. Richard hitchhiked across America, got married, went to graduate school, started a family, lived his life. The finial came with him. "I never really showed it to anybody," he says. "Then I made the decision. I said, 'You know, I'm coming up on my 50th reunion in 2023. I think I'll take it back to campus.'"

"We receive materials from alumni all the time," says Erika Castaño, digital initiatives archivist and University of Arizona history curator for Special Collections at the University of Arizona Libraries. Scrapbooks, pictures, diplomas — things like that. "Mostly we get a lot of yearbooks," she says. Richard's memento was different.

They arranged to meet at the library loading dock on the Friday of Homecoming weekend. "It was wrapped in a moving blanket," Castaño says. They brought it in through the back, unwrapped it, basked in the fading glow of history, the hundred-plus years of dirt.

"I didn't realize how big the piece was," Castaño says. "I think that's what drove us to take this item. It was, you know, a piece of Old Main, the emblem for our university, the heart of campus. It's been there since the beginning. It became this larger moment than just an old piece of a building."

"I'm a native Arizonan, and the history of Arizona was important to me," Richard says. "I'd visited both the U of A and Arizona State University, and I just felt a draw to the U of A, and a big part of that draw was beautiful Old Main. Just imagining what it was like to see that edifice rising up from the desert floor to ultimately become the university that it is; to walk down the Mall and feel something permanent here, something important in the life and history of our state; to turn around and look back at Old Main sitting there so prominently displayed — it just makes me feel good all over."

"Remember, there was a lot of turmoil at the time. ROTC was housed in [Old Main]. There were protests against the war in Vietnam and the Nixon administration. There'd been a fire in one of the Old Main stairwells, I remember.

"It was something I'd fallen in love with. And then to see that lone finial out there on the south end of the building all by itself and think, 'You know, I'd love to have that thing,'" he says, starting to laugh. "'I could just climb up there, get on that little wall ...'." ❖

PHOTO: **JUAN DELEON**

Arizona women's golf won the 2025 Big 12 Championship in a three-way playoff against Arizona State and Oklahoma State. After a tie in the final round, Arizona clinched the championship with a one-stroke victory in the playoff.

STORY BY **SARAH KEZELE**

WILDCATS COME OUT SWINGING

Arizona Athletics makes its mark in Big 12 debut.

In its inaugural season in the Big 12 Conference, the University of Arizona wasted no time announcing its arrival. Three programs — women's golf, men's tennis and baseball — claimed Big 12 tournament titles, firing a warning shot to the competition.

Several other Wildcat teams weren't far behind. Men's basketball, softball, women's gymnastics, and men's and women's swimming and diving all finished as runners-up in their respective Big 12 championship finals.

Head Coach Giovana Maymon and the women's golf program struck first on April 17, winning the title after a dramatic three-way playoff. The inside of their championship rings is engraved "PROGRAM HISTORY. 1ST BIG 12 TITLE."

Three days later, Head Coach Clancy Shields and the men's tennis program delivered another win.

Andrew Cain celebrates his ninth inning game-tying solo home run in Big 12 Tournament win vs. TCU. The Wildcats won the 2025 Big 12 Baseball Championship, defeating TCU 2-1 in extra innings.

"Seeing [women's golf] win it in the first year motivated everybody in our building to try to go do that," Shields says. "Across the board, as an athletics department, we're trying to be top two or three every year."

In late May, Head Coach Chip Hale's baseball program completed the conference championship trifecta before making a run to the College World Series. Despite coming from the Pac-12, a traditionally strong baseball conference, Hale noticed a step up in conference depth — and the consequences of underestimating it.

"We learned it the hard way in this league: You have to respect all the teams the same," Hale says. "We actually played way better against teams at the top of the league than the bottom."

Hale also learned that when it comes to home crowds, the Big 12 is simply a different beast.

"You're not going to California anymore," Hale says. "You go play UCLA or USC or Cal, and you get a thousand people — mostly parents and family. Now, you're going to college towns that are all-in on their university, which is really cool.

"You know you're in enemy territory."

As the fan bases got tougher, so did the logistics. Some of Arizona's teams had to endure longer, more demanding travel days. Time zone changes, cross-country flights and unpredictable weather all required new routines.

"We made some decisions to travel earlier to get there in enough time to have success," Shields says. "Because if you're going to travel across the country ... we're not just going there to show up and play. We're showing up to win."

"If we fly in, we'll try to get to a weight room, get their bodies moving," Hale adds. "The hydration part of it is super important."

Shields says the men's tennis squad got its routine down to a science fairly quickly, but there was one unforeseen obstacle on a road trip to Texas Christian University: $20 all-you-can-eat ribs.

"It became a competition of who could eat more ribs," Shields says with a laugh. "The next day and a half of practice were the worst ever."

Women's golf coach Maymon, who won her own Big 12 championship as a player with Baylor in 2015, now faces the weight of expectations after a dynamite first year as a head coach.

"What's hard is, you do well your first year, and now expectations are high," she laughs.

"But I always tell my players this: If we focus on every kid, and every kid does their job, we're going to win, and that's going to take care of the work." ❖

Arizona men's tennis beat UCF 4-1 in the final match to win the 2025 Big 12 Championship.

A DEFINING ERA FOR COLLEGE ATHLETICS — AND ARIZONA'S ROLE IN IT

BY DESIREÉ REED-FRANCOIS '97, R. KEN COIT VICE PRESIDENT & DIRECTOR OF ATHLETICS

THE BROAD CONTEXT OF COLLEGE SPORTS' TRANSFORMATION

College athletics has always been a mirror of America — adapting to the needs, values, and pressures of each generation. From Teddy Roosevelt's push in 1906 to make football safer, to the post-World War II era when the GI Bill expanded access to higher education and college rosters swelled, to the slow but essential progress of integration in the 1950s and '60s, sports have reflected both our nation's struggles and its aspirations. In 1956, Prentice Gautt took the field as Oklahoma's first Black scholarship football player in the Big Eight Conference — a milestone that would ripple across the country.

The 1970s brought Title IX, opening doors for generations of women. The 1980s ushered in the Supreme Court's Board of Regents decision, which transformed media rights and revenue models. Each of these shifts reshaped not only the games themselves but also the communities built around them.

Now, we are living through the fifth great transformation: the rise of Name, Image, and Likeness (NIL) rights and, as of July 1, 2025, direct revenue-sharing with student-athletes. These changes are rewriting the model of college sports in real time.

SEIZING THE OPPORTUNITY

Every transformation has carried tension — and possibility. NIL is no exception. I'll be candid: it's something college athletics should have embraced years ago. By delaying, we created confusion and inequities for student-athletes.

But today we have both the responsibility and the opportunity to lead. The task before us

is clear: preserve what is timeless about college athletics — the rivalries, the pageantry, the community — while building a model that is fair for student-athletes and sustainable for the future.

This kind of change cannot be addressed with quick fixes or short-term thinking. It demands a clear vision, disciplined execution, and the courage to make decisions that serve today's student-athletes while protecting the generations that will follow.

ARIZONA'S APPROACH

At Arizona, we see this era not as a burden but as an opening to lead. We operate a $140 million+ enterprise that supports 504 student-athletes across 22 sports, while engaging more than 30 constituencies — from coaches, alumni, and donors to corporate partners, media, and policymakers. Our economic footprint is significant: a recent campus study found Arizona Athletics generates $266 million in annual economic impact for Southern Arizona, and the publicity value of last year's football season approached $1 billion.

But the true measure of our work isn't dollars or headlines. It's the way athletics educates, unites, and inspires.

We are intent on running this department with the heart of a startup — innovative, aggressive, and always pushing forward — and the **discipline of a Fortune 500 company —** precise in how we manage resources and strategy. That mindset has already fueled progress: we brought multimedia rights in-house to take control of our brand and revenue streams; we reduced a $40 million structural deficit to $5 million in just 16 months and are on track to balance the budget this year; and we are building a revenue-sharing model that is both nationally competitive and fiscally responsible. It isn't perfect — no transformation is — but it is a far better starting point than the unregulated "Wild West" that preceded it.

Our commitment to innovation extends beyond finances. We launched the CEO Lab, connecting our staff with some of the best leaders in the country — many of them proud Arizona alumni. We created an AI Task Force to explore how predictive analytics can sharpen recruiting, development, fan engagement, and operations. These initiatives ensure our department is not just adapting to change, but actively shaping it.

We may not get everything right on the first try, but like our student-athletes, we will learn, adapt, and improve with discipline and resilience. That is how Arizona will continue to compete, inspire, and lead in this defining era.

BEYOND THE BUSINESS

Revenue-sharing doesn't change our mission — it elevates it. Our commitments remain the same:

- **Graduate leaders**
- **Win championships**
- **Galvanize our community**

But in this new era, we must do more.

We've built high-value partnerships to prepare our student-athletes for success far beyond their playing careers. With the College of Agriculture, Life, and Environmental Sciences, we are developing a first-of-its-kind academic minor that equips student-athletes to manage money, build a personal brand, and plan for their future. With the Eller College of Management, we created the *Bear Down Blueprint* — a strategic roadmap rooted in data, discipline, and innovation. And with a revitalized career development program, we've set a clear goal: 100% post-graduation employment. This fall, we'll host Friday career panels before every home football game, connecting student-athletes with alumni and industry leaders to open doors and spark ideas.

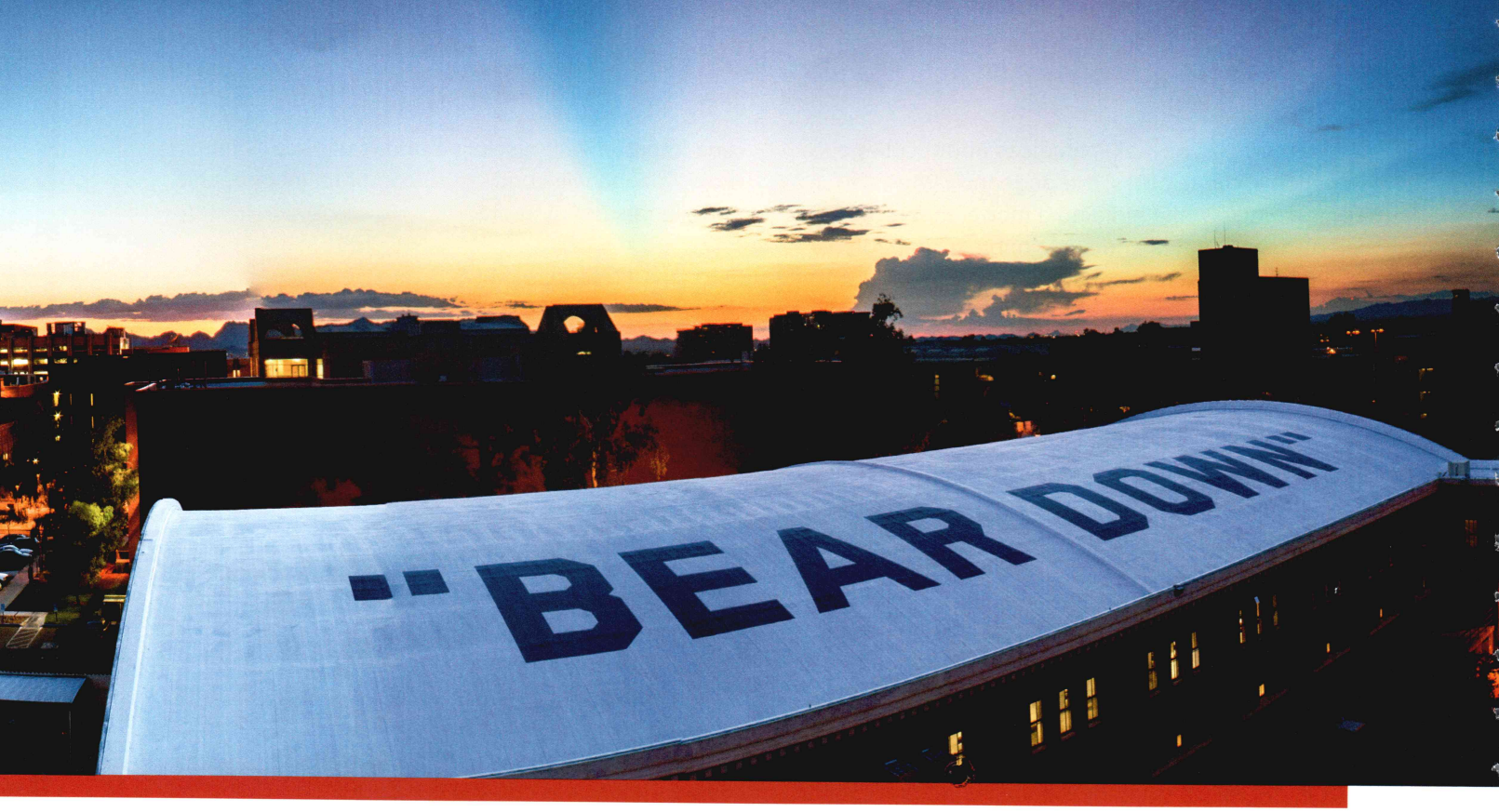
We're also deepening our ties to the community. This past spring, the *Bear Down Takeover Tour* made 22 stops across Arizona and California, strengthening relationships and pride far beyond campus. At many of those stops, student-athletes joined us, gaining valuable opportunities to share their stories and build presentation skills that will serve them long after their playing days are over.

These efforts, aligned with our pursuit of competitive excellence, ensure Arizona student-athletes leave here prepared to lead in any field they choose.

WHERE YOU COME IN

This new era will require the full support and strength of the Wildcat community. You can make a difference by:

- **Showing up —** your presence at games fuels our teams
- **Mentoring —** share your expertise with student-athletes
- **Investing —** support scholarships, facilities, and program excellence through the Wildcat Club.



In today's connected world, even something as simple as liking, sharing, or commenting on Arizona Athletics social media extends our reach and helps tell the Arizona story to a wider audience. Every ticket, every handshake, every interaction — online or off — strengthens our ability to compete and serve.

WHAT DOESN'T CHANGE

While the business of college athletics evolves, some things remain timeless: the first time you walk into Arizona Stadium and hear the Pride of Arizona cut through the desert evening; the moment McKale erupts before tipoff; the thrill of a last-second shot that turns strangers into family.

These moments are why people fall in love with Arizona Athletics — and why they carry that love for a lifetime.

THIS IS OUR "WHY"

Earlier this month, I spoke to the University of Arizona Police Department about leadership and cultural transformation. I told them: I don't have all the answers — but I do have belief.

That belief is deeply personal. I am not only Arizona's Director of Athletics and a proud alum — I am also the mother of a current Wildcat student-athlete. I know what it feels like to sit in the stands as a parent. And I know how quickly everything can change.

When my younger brother Roman was 19, a football injury ended his playing career — and changed all of our lives — in an instant. Watching him go through that experience shaped how I lead today. It's why I am so committed to preparing our student-athletes for life beyond the game.

My story is not unique. Our coaches and staff have similar heartfelt reasons for why they do what they do. We are all united in helping young people reach their full potential by providing every opportunity to pursue their hopes and dreams.

We believe Arizona can lead this new era with our values intact, our mission clear, and a vision worthy of the Block "A." Because while the way we do business is changing, our *why* never will. It is a privilege to serve and guide this department into the future. Please know, we will work hard to make you proud. ❖

Bear Down,

Desireé Reed-Francois '97
R. Ken Coit Vice President & Director of Athletics

LEARNING TO LEAD

STORY BY **SARAH BEAUDRY**

PHOTO: **CHRIS RICHARDS**

New provost Patricia Prelock grew up one of six siblings and a first-gen college student before becoming provost at the University of Vermont. Now she's bringing her clarity and resilience to Tucson.

Patricia Prelock arrived in Tucson from Vermont's Green Mountains, stepping into Tucson's June heat at the start of the monsoons. When we meet in her Old Main office, she's walked across campus in sneakers. She swaps her kicks for pink patent leather heels, already embracing the bright Southwestern palette.

As provost of the University of Arizona, she's charged with implementing strategic imperatives — "President Garimella calls it 'delivering on our promise,'" she says. "The things we must do to raise up U of A." Those imperatives are straightforward: success for all students, research that shapes the future and engagement with our communities to create opportunity, all anchored by the university's land-grant mission.

Her approach is practical. "A strategic vision is only as good as the implementation plan," Prelock says. "You must have a way to say, 'We actually did those three things.' So that's my job."

3:05 pm
Aug 08, 2025
Your Next Chapter Starts Now
Your Next Chapter Starts Now
Andrew Weil Center for Integrative Medicine
Patricia Prelock at the Council of Deans retreat in August 2025. Photo: Nina Bates

An accomplished scientist and scholar in clinical speech-language pathology, Prelock became UVM's provost in 2019. She served under Suresh Garimella, then UVM's president, and later took over as interim president after Garimella left for Arizona. Earlier, she had spent a decade as the dean of UVM's College of Nursing and Health Sciences and seven years as chair of the Department of Communication Sciences. Under her leadership, UVM achieved Research 1 status.

"It was a pretty scrappy institution," she says. "With limited funding from the state, we learned to how to do more with less." The U of A faces similar funding challenges, and has for years, which perhaps makes her arrival feel all the more fitting.

Prelock grew up in Ohio and was the first in her family to attend college. She earned bachelor's and master's degrees from Kent State University in northeastern Ohio, followed by a doctorate in speech-language pathology from the University of Pittsburgh. She'd actually considered coming to the U of A for her undergraduate studies, but life intervened — her mother had just welcomed another baby, and Prelock stayed closer to home to help take care of her youngest brother. She personally relates to U of A's significant population of first-generation students. "I was the second-oldest of six children and a first-generation student [myself]. So, I really appreciate the context here."

She's gotten a sense of the U of A in her first several months, hosting campus community conversations, immersing herself in campus culture and acclimating herself generally to what makes the U of A tick: the Bear Down spirit, passed down through generations. "You talk about resilience in the desert, and as you learn this culture, that's what people say: to live here, you have to be resilient. And 'Bear Down' is really about that, too ... about people being part of something greater than themselves."

She sees the paradoxes that desert dwellers understand all too well. "When I saw we were No. 1 in hydrology, I thought, in the desert? And then I realized — of course. You have to be, with no water."

"When I looked at this job and saw so many programs ranked in the top 10 or top 20, I thought, 'This is an amazing institution,'" she says. "Yes, the U of A has faced financial challenges and leadership changes, and sometimes a university can lose its way — but the core of the U of A has always been here." That enduring spirit, she adds, is worth celebrating: "We are Arizona's flagship, land-grant university. We are an AAU, R1 institution. We should be proud of that."

Resilience runs through her own story. Her paternal grandparents came through Ellis Island from Italy and what was then Austria-Hungary (what is now Czechia); her grandmother, the eldest of nine, spoke no English and left school in

sixth grade, when her own mother died, to raise her siblings. "To me, that's resilience," Prelock says. "They lived through two world wars, a pandemic and the Great Depression. They thrived. They figured out how to keep food on the table."

Her parents were both smart but lacked the opportunity to attend college; they were determined that their children would. Her mother took her to the library every week. "You had to get two or three books, read them and then go back. My oldest brother read 500 books his senior year, because that's what we did." Four of Prelock's siblings died young. "I saw my mom manage that," she says. "That's resilience."

Early in Prelock's career, frequent moves with her late first husband taught her to adapt. "There was no job? I'd write a grant," she recalls. That resourcefulness shaped an unconventional academic path — one she admits was challenging but ultimately fostered what she describes as "the ability to create my own space." Looking back, she shares, "I wasn't looking for leadership. Leadership found me."

A brother with Down syndrome led her to a career in speech-language pathology. "My expertise is in the nature and treatment of autism," she says. She honed the softer skills of leadership working with autistic children and adults with a range of disabilities, cultivating what she calls her "superpower": listening with empathy.

"They taught me how to listen in different ways, to think differently and to understand that somebody might have a different perspective than my own," she says. Her students also introduced her to the concept of double empathy: the idea that just as neurodiverse individuals work to navigate a neurotypical world, neurotypical people must also learn to navigate the world of people with neurological differences.

"My neurodiverse students would say, 'You're helping us adjust to the neurotypical world. But why aren't you adjusting to manage [in] my neurodiverse world?'" She recalls, "Point well taken. We have to give a little on both sides."

She also happens to be an amateur magician, a hobby that provides unexpected relevance to her work. "There is a neuroscience element to magic, with sleight of hand and perspective-taking," she says. "For the autistic children I work with, I like to share simple tricks and give them the banter that goes along with it — it becomes a way for them to engage socially." On a simpler level, "I love the delight that magic brings to those who appreciate the pure wonder of 'what just happened?'"

As a new hire in a period of institutional transition, Prelock has the unusual opportunity to step back and ask the big questions: What are our goals? How successfully are we pursuing them? What can we approach differently?

"We have to remember why we have higher education," she says. "It's about learning to think critically, solve problems, examine issues, ask the right questions and find answers."

That might mean deferring the emphasis on technical skills until a master's program — something Prelock did in her own career — or focusing on the ways a university can support its students beyond the classroom. Expanding advising for first- and second-year students, for example, or easing the passage for transfer students between community college and the U of A, or making space to listen to students affected by the recent shrinking of the university's cultural resource centers. "If we're going down a different path," she says of the changes, "we need to acknowledge what we've heard and explain why and how."

Of course, the goal is that all students graduate with as little debt as possible before entering a fulfilling career — but it's also about creating a culture that fosters leadership, citizenship, empathy and engagement; about remembering what the university is for and has the potential to do.

All this hard work requires the occasional blowing off of steam. For that, Prelock has rollercoasters — she is a fanatic. "My grandchildren and I love them," she says. "They'll say, 'Gigi, one more time!'" Her favorite is The Beast, a wooden classic at Kings Island in Ohio — one of the oldest and longest in the world.

Maybe it's the slow climb, the anticipation, or the rush of screaming and then laughing — the catharsis of the ride, not unlike a June day in Tucson with clouds building in the distance. Her arrival comes with that same sense of possibility. As this day at the U of A winds down, monsoon rains sweep across campus, breaking the heat and signaling an auspicious beginning. ❖

CLASS NOTES

1960s

Jerry Jaccard '65 received the Pro Cultura Hungarica Prize from the Hungarian Ministry of Culture and Innovation March 6, 2025, in Budapest, Hungary. The prize is awarded to foreign citizens who have made contributions to Hungarian culture. Jerry, who is president of the International Kodály Society, was invited to give a speech inaugurating a series of concerts in memory of composer, linguist and humanitarian Zoltán Kodály.

1970s

Jim Christ '72 published his fifth mystery thriller novel, "Right There in Black and White" (Genius Book Publishing). The Public Safety Writers Association awarded the book a bronze medal as one of 2024's best novels. Jim's novel "Girl Out of Darkness" won a gold medal in 2023.

Robert Hicks '74 '78 published his new book, "Wounded for Life: Seven Union Veterans of the Civil War" (Indiana University Press), which follows his earlier book, "Civil War Medicine: A Surgeon's Diary." Robert served in law enforcement in Tucson and Virginia before earning a doctorate in maritime history from the University of Exeter. A former naval officer, Robert enjoyed a second career as a museum and library director in Philadelphia.

Larry Hughes '77 published his novel, "Rings of Fire: How an Unlikely Team of Scientists, Ex-Cons, Women, and Native Americans Helped Win WWII" (Stackpole Books). The biography-driven story highlights the often-overlooked wartime innovations by diverse groups.

1980s

Wendy Gee '80 released her first book, "Fleet Landing," a mystery about a fire chief trying to rekindle his relationship with his daughter and stop a serial arsonist. Wendy's book is available in paperback, audio and digital formats. You can find more information at wendygeeauthor.com.

Harold Homan '81 retired from United Airlines after 33 years as a 787 captain. He is a Navy Fighter Weapons School graduate and former Navy fighter pilot, having flown the F-4S Phantom II and the F-14A Tomcat during 15 years of service. Harold has visited nearly every country except Antarctica, which he has on his bucket list. He currently resides in Colorado and flies seaplanes in Alaska.

Robert "Rags" Ragland '82 retired from American Airlines after 36 years. Robert was captain on the Boeing 787 on international flights to Asia and Europe out of O'Hare International Airport. Previously, he served seven years flying in the U.S. Navy. Robert is a member of Phi Gamma Delta and celebrated the Wildcats win in Barcelona, Spain.

Michael Wendelin '84 walked 150 miles of the Camino de Santiago in Spain with his wife and his children, Luke and Anna.

Carmen Baron '86 was named a National Heritage fellow by the National Endowment for the Arts, the nation's highest honor in the folk and traditional arts. Carmen, who is a structural and architectural designer, founded Danzacultura Mexicana in 1997 to preserve traditional Mexican folk dance and costume-making. Carmen's work has been exhibited at Tucson Meet Yourself, the Presidio San Agustin Tortilla Festival and La Canoa Ranch in Green Valley, Arizona.

Wolfgang Golser '86 traveled to Indonesia, visiting Java, Bali and Lombok. He explored the Prambanan and Borobudur temples, hiked tropical rainforests and climbed to the volcanic crater rim of Mount Bromo. He also observed sea turtles, fish and coral reefs while snorkeling.

1990s

Bryant Colman '91 was named to the Titan 100 as one of the top

100 chief executive officers in the greater Phoenix area. Bryant is the managing principal and a partner at Economic Incentives Advisory Group. He also is an adventure traveler, alpinist, polar explorer and community leader.

Laurie Todd-Smith '91 was sworn in as the assistant secretary for early childhood education at the U.S. Department of Health and Human Services after receiving an appointment from President Donald Trump.

Teresa Rosano '94 received the Distinguished Professor Award from the Association of Collegiate Schools of Architecture. Teresa is the first recipient from the U of A. She received the university's Gerald J. Swanson Prize for Teaching Excellence in 2024, and in 2023 she was named the American Institute of Architects' Arizona Educator of the Year and received the Margaret M. Briehl and Dennis T. Ray Five Star Faculty Award from the U of A's W.A. Franke Honors College.

Blake Kuehn '95 is pursuing a master's degree in clinical mental health counseling at Northwestern University. Blake is the founder of AskAether.ai, an AI-powered, ethically designed and culturally responsive reflective insight companion. It was created to support individuals facing obstacles to accessing in-person mental health care.

2000s

Kristina Diaz '03 was named a 2025 Carol Emmott fellow. Kristina will participate in a prestigious national leadership program that empowers exceptional women leaders in health care. As president of the Onvida Health Medical Group, she will lead the development of the Onvida Health San Luis Medical Campus, a facility opening in 2026 to serve the unique needs of the San Luis, Arizona, community. During her time at the U of A, Kristina was a member of the women's hockey team.

Maria Jhai '07 was appointed to serve as a judge on the Los Angeles Superior Court by California Gov. Gavin Newsom.

Gabrielle Pietrangelo '08, a Tucson-based songwriter, musician and educator, released her album "Back to the Heart," which includes five songs that pay homage to the region. Gabrielle's song "Summer Losers" was a winner of the 2023 John Lennon Songwriting Contest.

2010s

Michael Gombrich '12 was named a best-in-state wealth adviser by Forbes for excellence in ethics and professionalism. Michael is a private wealth adviser with Affirm Wealth Advisors.

Liz Gonzalez '12 leads the Gifted and Talented Academy at Phoenix Union High School District. She recently returned from the Henry Ford Museum's Invention Convention U.S. Nationals, where she coached her 9-year-old son, who presented his school safety hoodie. His invention, the Dripy Zippy, promotes safety and sustainability. Liz also has contributed to a book chapter on education advocacy.

Zachary Kipnis '13 is a senior manager product owner at Discover Financial Services, now Capital One, in Riverwoods, Illinois. He received the President's Award at Discover Financial in 2023.

Nora Rady '19 graduated with a doctorate in osteopathic medicine from Edward Via College of Osteopathic Medicine–Louisiana. Nora is excited to begin her neurology residency at Tufts Medical Center in Boston.

2020s

Damon Fairall '21 and **Kevin Thomas '24** co-host the "AZ Wildcats Podcast" for PHNX Sports, providing comprehensive coverage of all Wildcat athletic teams.

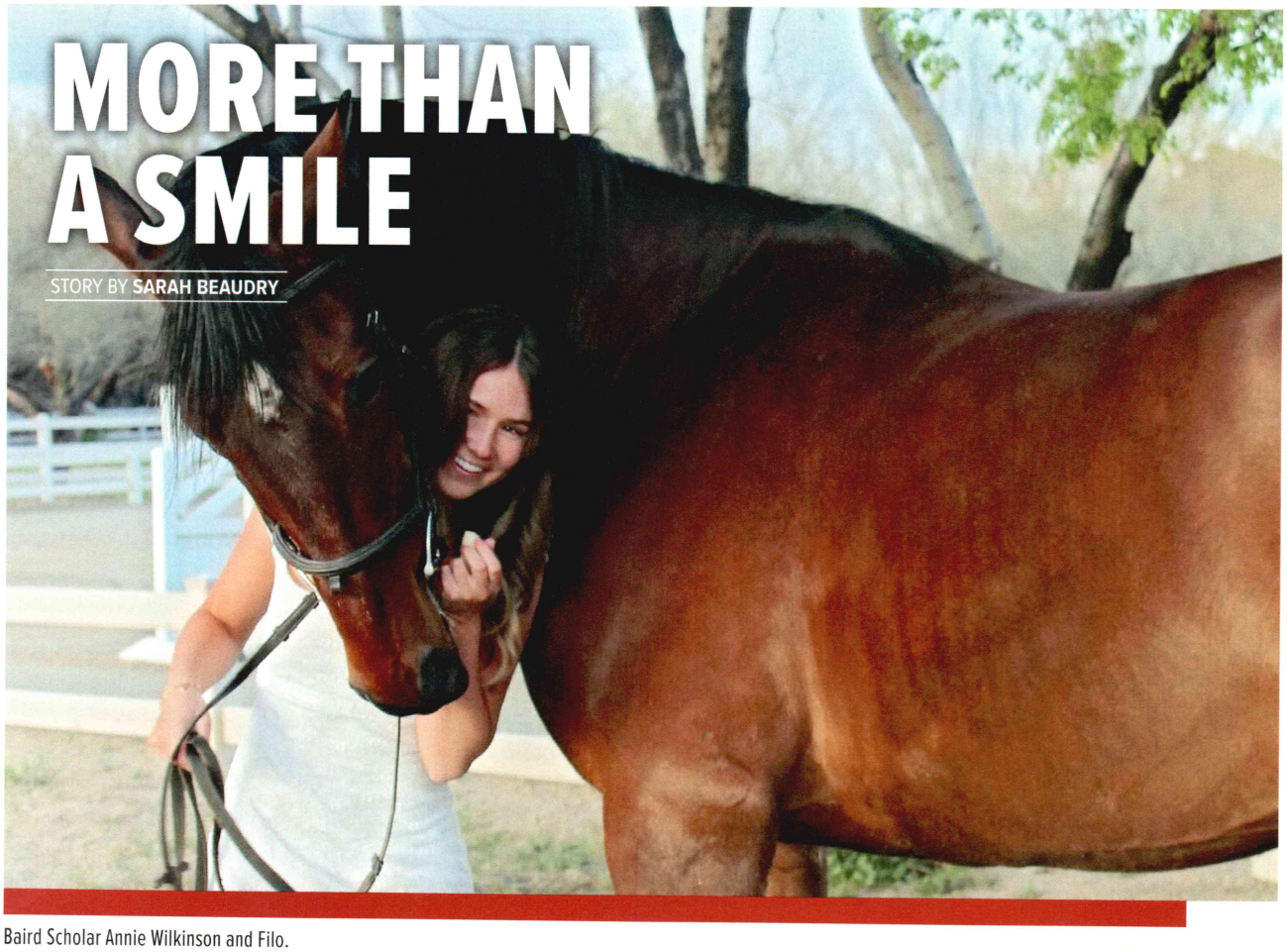
Jon Violetta '23, who works as an emergency room and pediatrics physician, is featured in an episode of "Conversations with AcroPsych." The podcast, hosted by his brother, Dr. Matt Campbell, discusses complex issues such as psychiatric disorders and substance abuse and treatment through conversations with leading experts. "Conversations with AcroPsych" is available on Spotify, Apple Podcasts and YouTube.

Sara Cheng '24 was named the 2025 Cherry Blossom Princess from Arizona and participated in a week of leadership and cultural activities in Washington, D.C. Sara met prominent political figures, went to the White House and walked in the National Cherry Blossom parade. The Cherry Blossom Princess Program began after World War II to rebuild relations between the U.S. and Japan through the symbol of the cherry tree blossom.

Martha Sesteaga '25 earned her doctorate in philosophy from the higher education program at the University of Arizona in May 2025.

MORE THAN A SMILE

STORY BY **SARAH BEAUDRY**



Baird Scholar Annie Wilkinson and Filo.

As a child, Annie Wilkinson '25 had a complicated relationship with her braces. "They used to hurt," she laughs, "so I'd take tweezers and remove all the rubber bands and wires — then put them back on right before appointments." Her orthodontic mischief revealed something important: a fascination with teeth and a hands-on curiosity that would shape her future.

That future has taken her from show jumping with her horse, Filo, to graduating from the University of Arizona with honors in neuroscience — and now to UCLA, where she's studying to become a dentist. Along the way, Wilkinson connected her early interests with a growing awareness of how oral health impacts overall well-being. "Everything in the body is connected," she says. "The brain affects the teeth, and the teeth can influence digestion. It all overlaps."

Wilkinson's connection to animals — especially Filo — has also been a guiding force. A competitive rider since high school, she trained five days a week while in college. "Filo has the personality of a golden retriever," she says. "He followed me around and loved being with people. All my friends were obsessed with him." Saying goodbye before moving to California wasn't easy, but she's comforted knowing he's with a loving trainer and bringing joy to new riders.

As a Baird Scholar, Wilkinson found a strong sense of support and belonging in the U of A's W.A. Franke Honors College community. "It opened doors for me," she says. "I didn't have to worry about getting a job right away, and I was able to say yes to experiences that helped shape my goals."

Inspired by her family's experience with Alzheimer's disease, Wilkinson studied neuroscience to better understand how the brain and body work together. That same curiosity now fuels her interest in dentistry and her desire to bring care to underserved communities.

Through pro bono work abroad and service at home, she hopes to transform lives — not just through healthy teeth, but by restoring dignity and possibility through every smile. ❖

A SENSE OF PLACE

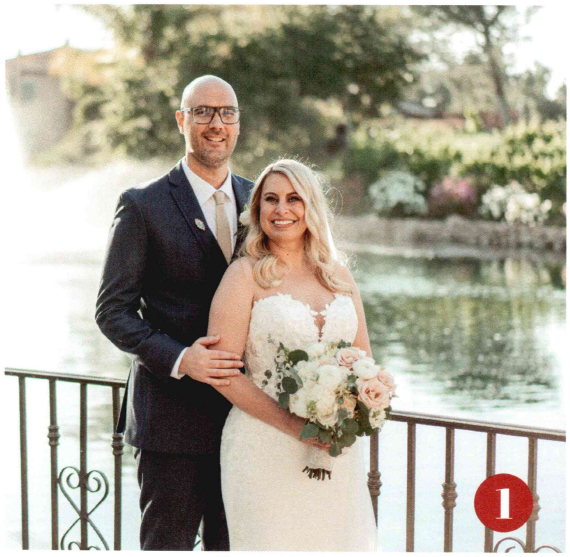
A resident of the President's Pond, aka the Turtle Pond.

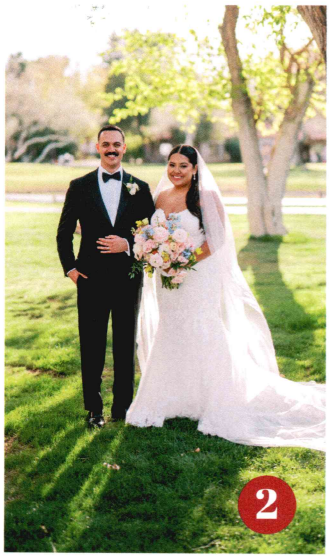
The University of Arizona has always held a special place in my heart. Some of my earliest memories are of the campus, even before I became a student there. My father earned his doctorate from the University of Arizona and served as an assistant professor in the Department of Sociology. He would often take me to campus, where I vividly remember playing on the chairs in the Student Union, feeling as though I was at a McDonald's. I also enjoyed spinning around in his office chair, and those moments planted the seed for my desire to attend the university someday.

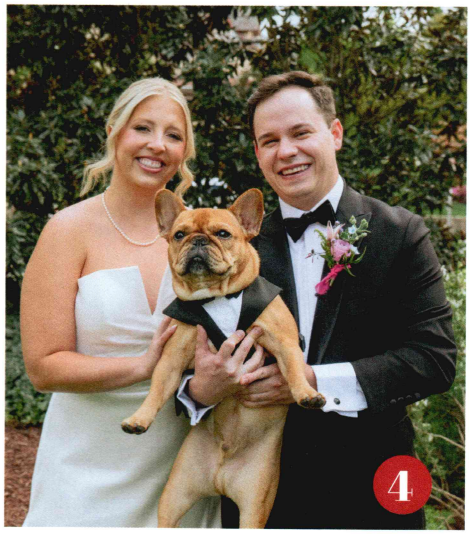
Years later, as a student, I had the incredible experience of taking a Sociology 101 class with one of my father's former professors. It was a surreal and meaningful connection to my family's legacy at U of A. The university played a significant role in shaping my character as I grew tremendously during my time as a student. I worked multiple jobs to put myself through college, yet I still managed to enjoy the vibrant community, engaging classes and diverse perspectives that the university offered. Being exposed to various ideas and viewpoints helped me expand my mind, making me more open to learning, and, more importantly, aiding me in building my career in medtech at companies like GE Healthcare and Olympus and, now, in my consulting business.

Even now, looking back, the campus still holds a special place in my heart. It remains one of my favorite campuses, with the iconic goldfish pond (now known as the Campus Arboretum Turtle Pond) and the bustling Mall. The blend of historic and modern buildings creates a beloved atmosphere that I cherish. **— Eva Zemberi '95**

WEDDINGS AND FAMILIES







1. **Kathryn Morrissey '09** and Joshua Morrissey were married May 2, 2025, in Westlake Village, California. During her time at the U of A, Kathryn was Wilma Wildcat.

2. **Anis Taylor '20 '21** and **Adam Leon '20** were married April 2, 2025, at the St. Thomas More Catholic Newman Center. They celebrated their wedding April 5 in Tubac, Arizona. Anis and Adam met in kindergarten on Tucson's west side, lost touch over the years and reconnected during their senior year at the U of A.

3. **Gary Kipnis '76** and Karen Kipnis celebrated their 45th wedding anniversary and 70th birthdays at Saguaro Buttes in October 2024. Gary is entering his 30th year as a real estate broker and owner of Gary A Kipnis – Real Estate Services. Previously, he served for over 17 years as chief executive officer and partner at R.S. Anderson Company, a major food and poultry distribution company.

4. **Jonathan Blohm '18 '23** and **Haley Harper '19** were married April 12, 2025. The couple met at the U of A in April 2016 as undergraduates.

5. **Jane Sebolt Harris '62 '63** and **Sheldon A. Harris '64** celebrated their 57th wedding anniversary. Sheldon retired after 34 years as a trial lawyer, 14 years as an Illinois circuit court judge and 8 years as an Illinois appellate court justice. Jane has worked as a private investment investor and counselor for 51 years. (No photo.)

ORDER OF OMEGA GREEK HALL OF FAME

Nominations are open for the 2026 Order of Omega Greek Hall of Fame class! This award celebrates distinguished U of A fraternity and sorority alumni whose exemplary achievements have brought great honor and prestige. Past inductees include Geraldo Rivera and former Arizona Secretary of State Betsey Bayless. Nominations are due Nov. 30. For more information, contact *marcosguzman@arizona.edu*.

FAREWELL, DEAR FRIENDS

Honoring Wildcats who have passed away

Theora W. Shelley '47
Virginia G. Young '49
Charles Plank '50
Sidney Jack McDuff '51
Janis W. Willis '52
Richard L. Musto '53
Robert C. Torgersen '53
Velma J. Vance '53
Sally Drachman Salvatore '54 '74 '83
Frances L. Whetten '54
Robert W. Browder '55 '58
Jackson R. Eddy '55
Lynn A. Greenwalt '55
Aldine V. Von Isser '56 '69 '74
Arthur A. Goldstein '57
Adrienne P. Reeves '57
Eugene C. Goebel '58
Juan A. Varela Hall '58
Peter F. Kerwin '58
Robert L. Hopkins '59 '70
Sandra J. Barry '60
R. Michael Henderson '60
David W. Hanna '61
Anne Neblett '61
William J. Pierce '61
Mary Ann Lindemann '62 '74
Scott Mansfield '62
Hal Tune '62 '66
Susan M. Black '63
K. Thomas T. Finke '63
William J. Lawrence '63
D. Michael Spalding '63
Sue M. Wooten '63
Kent F. Frates '64
Neal E. Justin '64
Bradley J. Walsh '64
Joseph E. Abodeely '65 '71
Salvatore R. Balsamo '65
Jay Busby '65
Jane L. Russell '65 '67
Dan A. Bach '66 '70
Reese E. Verner '66
Duane B. Wrobel '66
James W. Crane '67
Roger A. DuClos '67
William M. Durnil '67
Keith E. Eggert '67
Richard A. Hemwall '67
Lyman L. Kaiser '67
B. W. Randall '67
Dennis W. Dairman '68
Rebecca A. Barraza '69
Kathleen M. Bents '69 '74 '02
Diana W. Butler '69 '74
Gwen G. Gilsdorf '69
Clay R. Larson '70 '71
Margaret H. Daly '71
Juliette J. George '71'72
Richard S. Clarke '72
Gerald G. Hawley '72
Mary Alice Malone '72
Agnes R. Messina '72
Stephanie A. Parker '72
Elizabeth C. Roehr '72
Meredith A. Weltmer '72
James N. Keenan '73
Lee E. Bolen '74 '77
Jim R. Friedman '74
Jay M. Lenore '74
John R. Lucas '74
Mary C. Allen '75
Diane M. Simmons '75 '78
Ronald W. Stein '75
Anne R. Carlson '76
Robert T. Flegal '76
Edward J. Shisslak '76
James H. Straub '76
David J. Montoya '77
Diane D. Simms '77
Don H. Jordan '78
Carol L. Mayo '78
Michael E. Carr '79
Larry C. Owsowitz '79
Sue Ellen M. Rieder '80
Stuart W. Dunn '81
James J. Kolasinski '81
Stephen E. Silliman '81 '86
Owen R. Fonorow '84
Donna L. Schrage '84
John C. Palumbo '85 '98
Bonnie J. Finkler '86
Kathryn W. Kauffman '86
Christine M. Spears '88
Gary C. Burchard '89
Guy L. Heder '89
Patricia A. Nowatzki '89 '98
Peter A. Mendivil '90
Patricia E. Gonzalez '91
Minnie C. Reiblich '91
Jennifer A. Quinlan '92
Alison J. Harkins '93
Yang Yang '93
Kirsten A. Russler '96
Vincent C. Alexander '00
Ricardo R. Gonzalez '01
Robert J. Meyers '01
Christine L. Cain '02
Michael J. Clark '02
Kelly J. Asplin '03 '05
Walter E. Foxcroft '06
Leonard Zugby '06
Nichole A. Alex '07
Carolyn A. Pennow '07
Teri L. Wicker '08
Cara W. Smith '09
Samantha A. Holys '13
Sherie W. Quigley '18

HOMECOMING 2025
RED, BLUE AND TRUE
CELEBRATING VETERANS DAY
SUNDAY, NOV. 2 - SATURDAY, NOV. 8.
SEE YOU THERE!

ARIZONA
HOMECOMING
'63
Nov. 6-7-8
64
50th ANNIVERSARY of the WILDCATS
HOMECOMING
HOMECOMING 1965
NOVEMBER
12-13-14
ARIZONA
HOMECOMING
1966
HOMECOMING
67
arizona homecoming
Homecoming '74
HOMECOMING
'75
HOMECOMING '76
HOMECOMING
1983
Tradition Of
Excellence
HOMECOMING
HOMECOMING '86
A Proud Beginning
ARIZONA ALUMNI ASSOCIATION
ARIZONA
HOMECOMING 1986
Catch the Spirit
PRIDE
OF THE WEST
UA
1987
HOMECOMING
HOMECOMING '93
Wildcat Heart
UNIVERSITY OF ARIZONA
HOMECOMING '94
IT'S A
WILDCAT
WORLD
THE UNIVERSITY OF ARIZONA · TUCSON
Wildcats Come Marching Home
UofA Homecoming 1995
CLAWING TO THE TOP
HOMECOMING '96
THE UNIVERSITY OF ARIZONA
BUILDING
U
A
HERITAGE
HOMECOMING 2001
HOMECOMING 2002
A
CENTURY
of
PRIDE
THE UNIVERSITY OF ARIZONA ALUMNI ASSOCIATION
Paint the Town
Red
and
Blue
UA Homecoming
2003
The University of Arizona Alumni Association
Wild Wild Wildcats!
HOMECOMING
2004
The University of Arizona Alumni Association
Wilbur at 50:
Aged to Purrrfection!
THE UNIVERSITY OF ARIZONA ALUMNI ASSOCIATION · WILDCAT FOR LIFE · HOMECOMING 2009
THE UA ALUMNI ASSOCIATION
PRESENTS
One for the Ages
HOMECOMING 2010
WILDCAT FOR LIFE
125
YEARS
A CELEBRATION OF THE UNIVERSITY OF ARIZONA'S 125TH ANNIVERSARY
RED, BLUE, & BOLD
UA
HOMECOMING
2011
THE UNIVERSITY OF ARIZONA ALUMNI ASSOCIATION
UA ALUMNI ASSOCIATION
2012
HOMECOMING
2018
60
ARIZONA WILDCATS
Homecoming
2021
21

Homecoming buttons through the years.

PHOTO: **CHRIS RICHARDS**

BORN IN FRONT OF

In the fall of 2000, author Melani Martinez '00 took a class with University of Arizona creative writing professor Alison Deming. Deming, now a professor emerita, encouraged the students to write about experiences they had every day. At the time, Martinez was working at a small restaurant in the Presidio district of downtown Tucson called El Rapido, which her family had run since the 1930s.

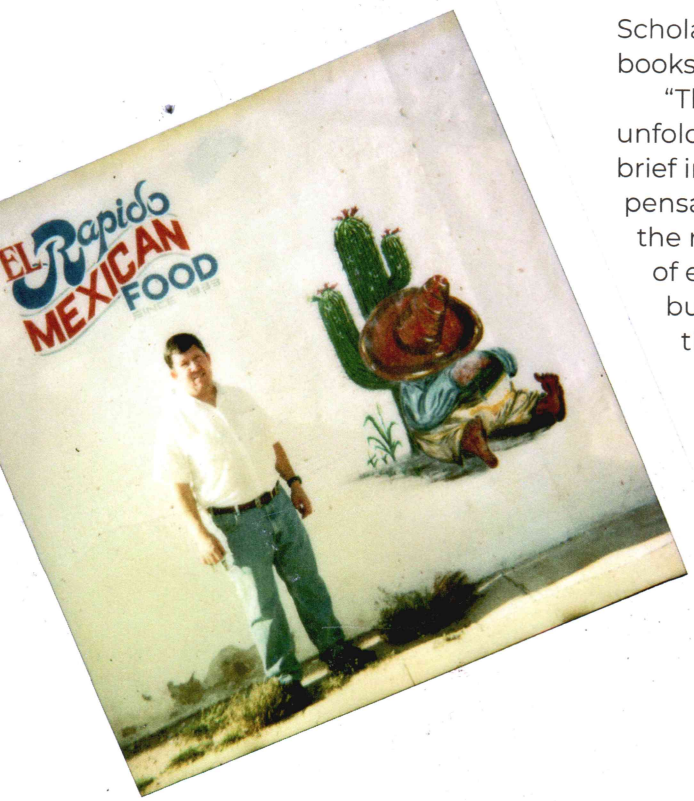
Martinez had worked at El Rapido since childhood. Her brother, Ricky, worked there, as did her Uncle Alberto, her father, Tony, and her grandmother and all seven of her grandmother's siblings. (Martinez, who as of this fall is an associate professor of practice in the U of A's Foundations Writing Program, later wrote, "I begin working for my father as soon as I can walk, talk, and take orders." And: "I feel as though I am born in front of beans and rice.")

A few days before the end of the semester, Martinez learned that El Rapido was going to close. On the last day of class, Deming asked students to celebrate by reading some of their work; Martinez broke down in tears. "I had no idea that it would ever leave my family, that it would ever be gone," she says. "Suddenly, when I had to read aloud, [I got] a completely different perspective."

That essay became the seed of a memoir called "The Molino," published by the University of Arizona Press in September 2024. (It has since been named a Southwest Books of the Year Top Pick by the Pima County Public Library and been shortlisted for the Nach Waxman Prize for Food and Beverage Scholarship by Kitchen Arts & Letters, a New York City bookstore specializing in writing about food and drink.)

"The Molino" is not a linear memoir. Instead, it unfolds as a series of vignettes held together by brief interludes attributed to a character called el pensamiento, or "the thinker." The vignettes are, for the most part, small: anecdotes, images, the kind of experiences that seem peripheral to our lives but over time come to illuminate and even define them.

Martinez remembers her father not quite being sure what to make of it. She tried to explain that she was only writing the story the way she'd learned it: in fragments, over time, not always in order. "You would give me one little piece of the puzzle," she remembers telling him. "And then, you know, literally seven years would go by, and you'd give me another."



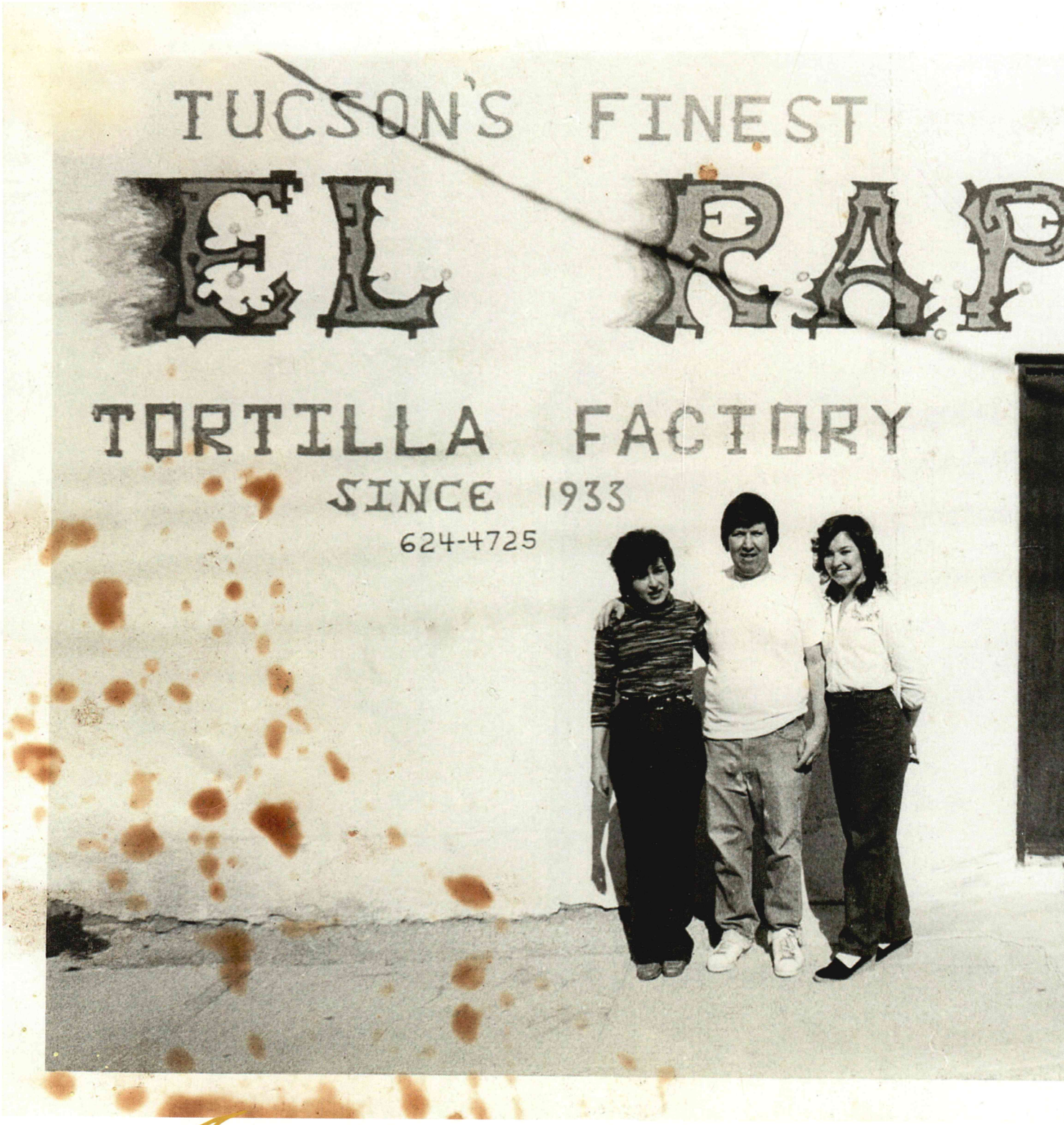
Photos courtesy Melani Martinez except where noted

The window of the former El Rapido, summer 2025. Photo: Chris Richards

STORY BY **MIKE POWELL**

BEANS AND RICE

Melani Martinez's memoir "The Molino" is a revelatory look at food, family and Tucson history.



The idea for el pensamiento came from a caricature of a sleepy Mexican man in a wide sombrero slumped against a Saguaro cactus that Martinez's uncle, Alberto, had painted on the side of El Rapido in the late 1980s. Martinez remembers being confused as to why people were so offended by it. Later, she realized it was a kind of curse in search of redemption. "It felt really good for me to be able to redeem that image," she says. "To turn it into something that

had authority, that had spirit, that had almost — you know — no beginning, no end." He also became a way for Martinez to reconcile herself to aspects of her family that she had turned away from when she was younger. "He speaks in scripture," she says. "I had this other part of the story of not being able to retain the faith that my grandparents and great-grandparents had, and then, you know, rediscovering it."

'I had no idea that it would ever leave my family, that it would ever be gone. Suddenly, when I had to read aloud, [I got] a completely different perspective.'

The story of El Rapido doubles as a story about the changing nature of downtown Tucson. Historically, the Presidio had been a community of Mexican Americans and other people of color; by the time Martinez was working at El Rapido, it was oriented toward tourists and law offices. "[Gentrification] is something we continuously talk about in this city," she says. "There's this sense of wanting to improve things but to not make it inhospitable for people who were here before." (Martinez cites U of A professor emeritus Lydia Otero, in particular their book "La Calle," as a major inspiration for how to have these difficult conversations in a productive, honest way.)

"The Molino" is out in the world and doing well. In the meantime, Martinez is focused on her work at the university, in particular a first-year writing class about the Sonora Borderlands housed within a grant project called Project ADELANTE and designed, in part, to give the university's Hispanic population a novel way into the gen-ed English curriculum while supporting student retention, too.

"I've been trying to get students to be more open about the kinds of experiences they've had in Tucson," she says. "To write that in class so that they feel like they belong." This becomes as much a part of the work as the work itself. "I have been, I feel like, a conduit for helping other people," she says. "Our fantastic students." She was one once, too. ❖

Learn more about "The Molino":

BEARING IT TOGETHER

AS TOLD TO ARIZONA ALUMNI BY AURORA SEEKINS '25

A recent graduate reflects on her transition from foster care to independence to college, and the community she found through a unique U of A program called Fostering Success.

I moved around a lot as a kid. I haven't lived with my mom since I was 13, and the only information I have about my biological father is that his name was Tony — *maybe*. I lived in a group home in Montana after I left my mom, then ended up in Tucson with my brother's dad, who my mom was dating when I was born. We're not related, but he's on my birth certificate, so technically, he was my guardian.

I'd experienced so much instability when I was younger that I was determined to stay in one place. I'd actually never finished a full school year until high school. I wanted to make connections, build relationships. I became captain of the track team. I played basketball. I was vice president of the GSA, the gender-sexuality alliance.

The group home I'd lived in was nice, but it was restrictive in ways that would've been difficult for the high schooler I was at the time. You couldn't have your own phone, for example. You couldn't be out at certain hours, meaning that I wouldn't have been able to participate in my extracurriculars. I'd cultivated so much autonomy, but I knew if I ended up back in a group home or foster care, that autonomy would be stripped away.

When I was around 16, my guardian got evicted. His credit and renter's history had taken such a hit by that point that we couldn't get into another place. He told me I was going to have to move into my car. I was working pretty much full time, but couldn't get my own apartment, because I was a minor. I ended up moving in with my boyfriend at the time.

There was a huge debacle with my FAFSA application my

senior year because I was facing independence. People who work in schools, they're mandatory reporters. I knew if I told them my living situation that they'd have to report it to the Arizona Department of Child Safety, but I didn't really know what would happen after that. My worst-case scenario was that they would realize that there was no one here to take care of me and I'd have to go back to live with family in Montana, which — that was something that I was really worried about.

It's not super confidence-building to not-have a home or to live with your family. There's stigma that surrounds poverty and being in these types of situations. Beyond just being worried that I'd get flagged and lose my autonomy, I was embarrassed. I kept it very, very much on the down low. None of my friends knew.

I used my guardian's information and ended up getting flagged for federal verification, meaning I had to upload both his and my tax documents. For most people, it would be fine. My situation was different. My guardian was living about three hours away at this point, so the communication was hazy. It was like pulling teeth trying to get this tax information from him.

I found out that I met the federal qualifications for homelessness. And if you qualify as homeless, you can file independently, which is what I did. I ended up graduating salutatorian. I got full funding from the U of A. I got really lucky. I haven't talked to my guardian since I turned 18.

The biggest thing my freshman year of college — and I think this is something first-gen students struggle with, too — is this fundamental sense of not-knowing what you're doing. There's a lot of messaging on campus that's like, *take control of your destiny*, but the reality of what that means isn't always clear. I realize this sounds negative, but there are so many students on campus who have had these great lives and come in with a background of privilege

and things going well for them. They have families that can help them, or exposure to people who have navigated college before. I was trying to figure things out on the spot. It can just feel like you're behind somehow, or like you're in a different world.

At the beginning of my freshman year, I went to this big dinner for the recipients of something called the Arizona Assurance Scholarship. One of the requirements the scholarship involved was joining a program that had a mentorship aspect. I remember going through the options and seeing Fostering Success [a program focused on building community on campus for students who have experienced the foster care system, housing insecurity or homelessness, and those who are unaccompanied youth]. There was a little blurb about it.

Mostly, I joined to fulfill the requirements. It ended up being the first place where I felt like I'd found my people. I've heard this from other people in the program, too: that being in Fostering Success was like being with people who really understood what they were going through.

I remember coming into the Fostering Success office one year before the career fair. I was working really hard on getting a job. I'd printed out a bunch of copies of my resume and wanted to make sure my outfit looked good. So, I came in and modeled for everyone, and they critiqued me. They were like, "Unbutton the top button of your blazer," "Wear your name tag on that side, not on that side," things like that. It seems silly. Or like the kind of thing you might FaceTime your mom about, if you had one. But it's this support I hadn't had before, or really even known was there.

There was tangible support, too. Fostering Success sent me to the me to the National Network for Youth's National Summit on Youth Homelessness + Hill Day in Washington, D.C., three years in a row. I got the chance to be in rooms I wouldn't ordinarily be in, sharing my story with congressional staffers, advocating for legislation to support my community, growing both in confidence and my ability to speak up. I also participated in an internship in the summer of 2023 through the Fund for American Studies in D.C. doing policy work. I was worried about the out-of-pocket costs associated with taking an internship and turned to Fostering Success for advice. I ultimately ended up getting a scholarship that covered my living expenses and enabled me to

participate in the program — an opportunity many in my shoes would not have been able to accept, and a foundational experience both personally and professionally.

One of the things we talk about in Fostering Success is this fierce hyper-independence. I didn't realize how much burden I was bearing until I had someone else to bear it with me. Even stuff I think I have figured out — it's nice to just have someone there to help hold it with me. It makes everything so much easier. Because you can do things on your own. It's very possible to navigate the world and school and friendships and relationships and life alone. But most people don't, and most people don't have to. And it's really nice not to have to.

There was one big moment for me my freshman year. I went cliff jumping with this group of people I'd met on campus. There was this girl who got this huge allowance from her parents. They would send her, like, $600 a week. I was floored by that. And she was complaining about how her parents were a little late sending it. I remember feeling so frustrated and angry. I was waiting tables 30-40 hours a week and going to classes full-time. I remember thinking, "Man, I would give anything, *anything* to be sent even $100 a month, $50 a month. She's sent thousands, and she's complaining."

She was like a caricature of this privilege to me at that point — her suitemates were complaining about how she never took out the trash and she was talking about how her maid used to do it for

her at home, and so she'd never really learned how to do that. I just thought, "what a brat, what a privileged brat."

But looking back at it, she was in an entirely new world for herself, trying to figure out who she was, learning how to take care of herself for the first time. I don't feel the same isolation that I did my freshman year. I used to have almost a "me versus them" mentality. And that shifted a lot over my time at the U of A, because at that point, I was floundering a little bit, just trying to find my place and sort out my life and control everything around me. And everybody else was also struggling with those things, too. I just didn't realize it until later.

My big dream was to go to law school. I knew that economics was one of the top majors for people who go on to law, so I chose that. My other major, I'd just stumbled into. I had to do required meetings with my advisers early on because I hadn't decided on a major, and they really wanted me to get on a decided path quickly. And they told me about the PPEL program, which is philosophy, politics, economics, and law.

It feels like a lot of the concepts I studied in economics I knew because I'd lived through them. Like, there's something called the benefits cliff in welfare economics. It's where if you make over a certain amount of money, you lose benefits, so people will try to stay to the left of that. I lost my health insurance when I was in college because I was working full-time to support myself, but because I was independent and working full-time to support myself, I made too much money to qualify for these benefits. I could recognize the value in trying to keep your income low, which is something people do. They'll try to stay below the threshold if they think they'll lose health insurance or SNAP. People around me in class were a little bit confused, but I was like, "oh yeah, duh, I knew about this."

My junior and senior year, I did Ethics Bowl. It's like a debate team for ethical cases: We got a bunch of cases, we made arguments on them, we would go to competitions. It was probably one of my favorite things that I did in college. And this year we were quarterfinalists in the national competition.

Studying ethics has been such a funny transformation for me. I'd taken an intro to moral thinking class my freshman year, and I remember thinking, "this is so stupid. This is one of the silliest classes I've ever taken." We were learning deontology and divine command theory and utilitarianism, and after we learned about every moral theory the professor would be, like, "But that one's not really right for this and this and this reason," and I thought "well what are we learning this all for? When are you gonna tell me the correct moral theory?" It ended up being one of my biggest focuses in school.

I graduated in May and moved to Providence, Rhode Island, for a job. I'm going to be starting my master's in applied economics at Boston College this fall and commuting up from Providence. It's a huge shift, but I'm excited.

Eventually I'd like to study public law, be someone who advocates for people and works for things that are worth it. But, you know, I'm flexible. I had this idea coming into school that you had to have things figured out, otherwise there's some sort of instability. You have to know what the future is going to be. And I think that it makes a lot of sense, because, in my case, if you don't know what the immediate future is going to be, it can be, you know, homelessness. Now that I have a decent grip on my life, I think that things can work out. I think that things work out the way they're supposed to. ❖

Learn more about the mission and work of Fostering Success.

Max occupancy, circa 1963. Image courtesy Special Collections, the University of Arizona.

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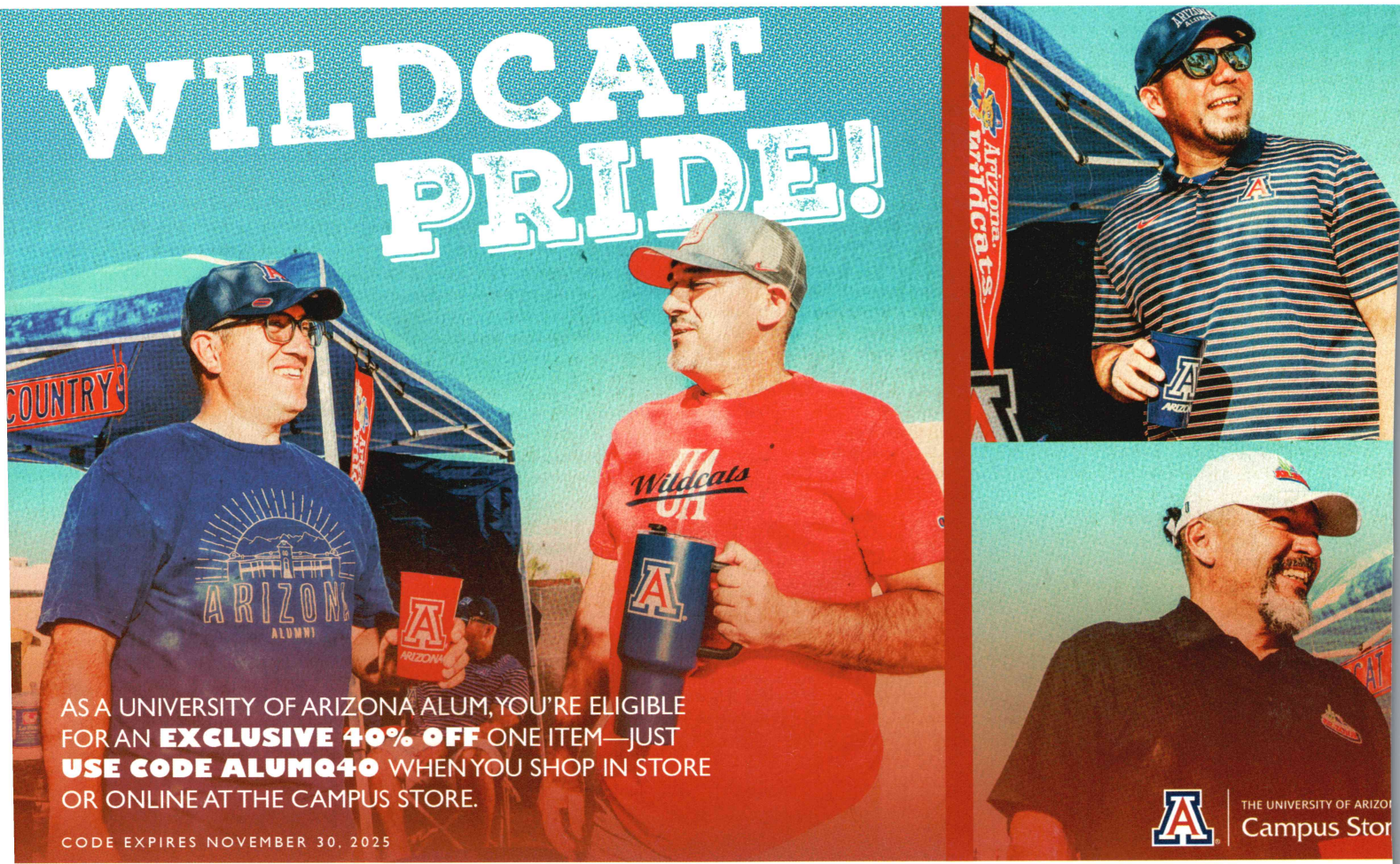
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